Supreme Court, U.S.
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No._____

In The Supreme Court of the United States

OCTOBER TERM, 1993

JAMES RICHARD O'CONNER,
Petitioner,
vs.
COMMONWEALTH EDISON COMPANY, a Corporation and LONDON NUCLEAR SERVICES, INC., a Foreign Corporation,
Respondents.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES SEVENTH CIRCUIT COURT OF APPEALS

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Whether 42 U.S.C., Sec. 2210(n)(2), the Price-Anderson Amendment Act of 1988, unconstitutionally grants exclusive Federal jurisdiction of state based tort claims to the Federal Court regarding a nuclear exposed worker?

2. Whether compliance with Federal Nuclear Safety Standards is merely evidence of due care or conclusive on this issue when applying state substantive law?

TABLE OF CONTENTS

Page

QUESTIONS PRESENTED 4

TABLE OF AUTHORITIES 5

OPINIONS BELOW 7

JURISDICTION 8

STATUTORY PROVISION INVOLVED 8

STATEMENT UNDER RULE 29.4(b) 9

STATEMENT 9-14

A. The History of Price-Anderson Act 10-13

B. Proceedings Below 13-14

REASONS FOR GRANTING THE PETITION 13-23

I. 42 U.S.C., Sec. 2210(n)(2) of the Price-Anderson Amendment Act of 1988 Unconstitutionally Grants Exclusive Federal Jurisdiction of State Based Tort Claims to the Federal Court Regarding a Nuclear Exposed Worker 14-20

II. Compliance with Federal Nuclear Safety 2 Standards is Merely Evidence of Due Care and not Conclusive of this Issue When Applying State Substantive Law 20-23

CONCLUSION 24

APPENDIX A - United States Court of Appeals for the Seventh Circuit, Case No. 92-2989, "James Richard O'Conner, Plaintiff/Appellant vs. Commonwealth Edison Company and London Nuclear Company, Defendants/Appellees

APPENDIX B - O'Conner vs. Commonwealth Edison Co., 807 F. Supp. 1376 (C.D.Ill. 1992)

APPENDIX C - O'Conner vs. Commonwealth Edison Co., 770 FSupp.448 (C.D.Ill.1991)

APPENDIX D - O'Conner vs. Commonwealth Edison Co., 748 F.Supp. 672 (C.D.Ill.1991)

APPENDIX E - Order entered July 23, 1992 granting Defendants' Motion for Summary Judgment

TABLE OF AUTHORITIES

Page

CONSTITUTION

United States Constitution, Article ~~III~~, Sec. 2 8

CASES

Commonwealth of Pennsylvania vs. General Public Utilities, 710 F.2d 117 (3d Cir. 1983) 19

Darling vs. Charlston Hospital, 33 Ill.2d. 326, 211 N.E. 253 (1965) 13,22,23,24

Davis vs. Marathon Oil Co., 64 Ill.2d 380, 356 N.E. 2d 93 (1976) 23

In Re TMI Proceedings, 735 F.Supp. 640 (M.D. Penn. 1990) and 940 F.2d 832 (3d Cir. 1991) 20

Klick vs. Metropolitan Edison Co., 784 F.2d 490 (3d Cir. 1986) 19

Merrill Dow Pharmaceutical, Inc. vs. Thompson, 478 U.S. 804 (1986) 17

Osborn vs. Bank of United States, 22 U.S. (9 Wheat.)(1824) 10,11,14,15,21

Rucker vs. Norfolk & Western Railroad Co., 77 Ill.2d 434, 396 N.E.2d 534 (1979) 23

Stibitz vs. Gen. Public Utility Corp., 746 F.2d 993 (3d Cir. 1984) 19

Verlinden vs. Central Bank of Nigeria, 461 U.S. 480 (1983) 14,15

STATUTES AND RULES

28 U.S.C., Sec. 1441 9,13

28 U.S.C., Sec. 1254(1).....8

42 U.S.C., Secs. 221-2281 10

42 U.S.C., Sec. 2014(q).....11

42 U.S.C., Sec. 2014(w).....8,16

42 U.S.C., Sec. 2014(hh) 8,12,16,24

42 U.S.C., Sec. 2210(n)(1).....18

42 U.S.C., Sec. 2210(n)(2) 4,8,10,11,12,14,16,21

10 C.F.R., Sec. 20.101.....21

MISCELLANEOUS

H.R. Rep. No. 104, 100th Cong., 1st Sess.,
pt.1 19

Illinois Pattern Jury Instructions, Sec., 60.01 22

Restatement(2d) of Torts, Sec. 286 23,24

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PETITION FOR A WRIT OF CERTIORARI

JAMES RICAHRD O'CONNER respectfully petitions for a Writ of Certiorari to review the judgment of the United States Court of Appeals for the Seventh Circuit of this case.

OPINIONS BELOW

The opinion of the Court of Appeals (App., infra, 1-34a) is unreproted. District Court rulings on plaintiff's Motion for Remand to State Court is reproted at 770 F.Supp 448 (C.D.Ill. 1991) and on Defendants' motion to determine legal duty owed to plaintiff is reported at 748 F. Supp 672 (C.D.Ill. 1990). The District Court's order granting summary judgement is unreported. All three rulings by the District Court can be found in the Appendix.

JURISDICTION

The Court of Appeals entered its judgment on January 7, 1994. (App., infra, 1a.). The jurisdiction of this Court is invoked under 28 U.S.C., Sec. 1254(1)

STATUTORY PROVISION INVOLVED

Article III, Section 2, of the United States Constitution provides:

> The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and the Treaties made, under their authority;...United States Constitution, Article III, Section 2.

Section 2, of the Price-Anderson Act, 42 U.S.C., Sec. 2210(n)(2) provides, in relevant parts, that:

> With respect to any public liability action arising out of or resulting from a nuclear incident, the United States district court in the district where the nuclear incident takes place...[and]...upon motion of the defendant or of the Commission, or the Secretary, as appropriate, any such action pending in any State court (including any such action pending on August 20, 1988) or United States district court shall be removed or transferred to the United States district court having venue under this subsection.

42 U.S.C., Sec. 2014(w) provides in relevant part, that "the term 'public liability' means any legal liability arising out of or resulting from a nuclear incident..."

42 U.S.C., Sec. 2014(hh) provides in relevant part, that:

> The term "public liability action", as used in section 2210 of this title, means any suit asserting public liability. A public liability action shall be

deemed to be an action arising under section 2210 of this title, and the substantive rules for decision in such action shall be derived from the law of the State in which the nuclear incident involved occurs, unless such law is inconsistent with the provisions of such section.

STATEMENT UNDER RULE 29.4(b)

Since the proceeding draws into question the constitutionality of the Act of July 28, 1953, 67 Stat. 226, 28 U.S.C., Sec. 171, an Act of Congress affecting the public interest, and neither the United States nor any agency, officer, or employee thereof is a party, it is noted that 28 U.S.C., Sec. 2403(a) may be applicable.

The United States Federal District Court for the Central District of Illinois, Peoria Division, has certified to the Attorney General the fact that the constitutionality of an Act of Congress has been drawn in question. The Department of Justice, Civil Division, has intervened.

STATEMENT

Plaintiff, James Richard O'Conner, sued Commonwealth Edison Company and London Nuclear Services in October of 1985 in the Circuit Court of Tazewell County, Illinois. Mr. O'Conner was performing pipefitting duties at Defendant Commonwealth Edison's nuclear power plant in Cordova, Illinois. Plaintiff alleges he was exposed to excessive radiation, resulting in severe injuries during the flushing of pipes by Defendant, London Nuclear Services, to clear the pipes of built-up radioactive material while he was in the dry well of the plant.

The Defendants removed the case to Federal District Court under 28 U.S.C., Sec. 1441, contending that the court had jurisdiction under 42 U.S.C., Sec. 2210(n)(2). The District Court agreed that federal jurisdiction existed

and denied O'Conner's motion to remand the case to state court. The District Court also entered an Order finding the Federal Regulations setting forth the permissible limits of radiation exposure was the duty to be applied to Defendants. On July 23, 1992, the District Court granted the Defendants' Motion for Summary Judgment. The Court of Appeals affirmed the decision of the District Court.

A. The History of the Price-Anderson Act

This case involves the Price-Anderson Act and more specifically the construction of the Price-Anderson Amendment Act of 1988 (hereinafter referred to as the "Act") in light of Osborn vs. Bank of The United States, 22 U.S. (9 Wheat.) 738 (1824), and subsequent cases. Construction of the 1988 Amendment to the Act is aided by an understanding of the background of the Price-Anderson Act.

The Atomic Energy Act of 1954 was enacted to license and regulate nuclear facilities. 42 U.S.C., Secs. 2211-2281. The purpose was to spur the development of the private sector into the nuclear industry. However, the private sector was unwilling to become involved in the nuclear industry due to fears concerning liability. Congress responded by passing the Price-Anderson Act of 1957, the main purpose of which was to limit the private sector's liability.

In 1966, a new provision was added stating that those indemnified by the Price-Anderson Act must waive common law defenses in the event of an extra nuclear occurrence (hereinafter referred to as "ENOs") and in the case of an ENO, transfer would be allowed to a Federal District Court.

1988 marked the last major amendment to the Price-Anderson Act. The 1988 Amendments provided for the removal of, and original jurisdiction over claims arising from any "nuclear incident" instead of actions arising only

from ENOs. 42 U.S.C., Sec. 2210(n)(2). A "nuclear incident" is an event which causes injury arising out of or resulting from radioactive, toxic, explosive, or other hazardous properties or source, special nuclear, or by-product material . . . 42 U.S.C., Sec. 2014(q).

A historical review of the Price-Anderson Act reflects that the congressional enactment of the 1988 Amendments were the result of the lobbying efforts of the Defendants in pending litigation of the Three Mile Island (hereinafter referred to as "TMI") nuclear disaster.

After the TMI disaster, cases were filed in multiple counties of the state courts of Pennsylvania and Mississippi. The defendants attempted to remove those cases to federal court alleging the actions arose under the Price-Anderson Act. The Third Circuit rejected federal question jurisdiction and denied removal to federal court. Jurisdiction was rejected because Congress created no federal tort causes of action for "nuclear incidents".

Subsequent to these opinions, the TMI defendants successfully lobbied Congress to amend the Price-Anderson Act to allow for removal of all claims created by a "nuclear incident" to a single federal district court. 42 U.S.C., Sec. 2210(n)(2). While it is clear that the amendment permits removal of all "nuclear incident" claims to federal court, what is not clear is whether Section 2210(n)(2) creates a federal cause of action or is it a hollow grant of federal jurisdiction.

If Section 2210(n)(2) is a hollow grant of federal jurisdiction, this part of the statute must be struck down according to Article III of the Constitution and Supreme Court precedent. Article III requires causes of action to "arise under" the Constitution or laws of the United States in order for federal courts to have subject matter jurisdiction. In the leading Supreme Court case, the Osborn court held "a case cannot be considered to be 'arising under' a federal statute when that statute is nothing more than a jurisdictional grant." (App., infra, 12a) The statutory language and congressional history provide some guidance in

determining whether a federal cause of action was created.

The House Committee report recognized that Article III limited the jurisdiction of federal courts. Report of Committee on Interior and Insular Affairs on HR 1414 (1988) at page 18. The Committee Report conclusively stated:

> H.R. 1414 expressly states that any suit asserting public liability shall be deemed to be an action arising under the Price-Anderson Act, thereby making suits asserting public liability "Cases *** arising under *** the Laws of the United States" within the meaning of Article III. Rather than designing a new body of substantive law to govern such cases, however, the bill provides that the substantive rules for decision in such actions shall be derived from the law of the State in which the nuclear incident involved occurs, unless such law is inconsistent with the Price-Anderson Act." Interior and Insular Affairs Committee Report, supra, at page 18.

Sections 2210(n)(2) and 2014(hh) codified the conclusions made by the Interior Committee. Section 2210(n)(2) is applied to any public liability action arising out of a nuclear incident. According to Section 2014(hh), in a "public liability action", the substantive rules for the decision in such an action will be derived from the law of the state in which the nuclear incident involved occurs, unless such law is inconsistent with the provisions of such sections. While federal jurisdiction is created, the federal cause of action is to be based upon state law.

The question presented here is whether the Act created a federal cause of action allowing for the removal of a "nuclear incident" action to federal district court from a state court in a non-diversity case. Furthermore, if jurisdiction is proper, can the court of appeals make nuclear safety regulations conclusive on the issue of due care in light of contrary state law?

B. Proceedings Below

The Appellees removed this case from Illinois state court to the federal district court pursuant to 28 U.S.C., Sec. 1441(a). The district court denied Appellant's motion to remand, holding that the Act created federal subject matter jurisdiction and found that the Federal Regulations setting ceiling limits for radiation dosage not to be evidence of negligence but are in themselves conclusive. App., infra, a. On July 23, 1992, the district court entered its order granting Defendants' Motion for Summary Judgment incorporating its two prior rulings that its jurisdiction was constitutional and the standard of care was conclusively stated by the Federal Regulations. App., *infra*, a.

On August 19, 1992, Plaintiff appealed the decision of the District Court. The Court of Appeals affirmed the District Court on both counts. The Court of Appeals found on the basis of Osborn that the Act created a federal cause of action establishing federal jurisdiction for that cause of action. App., infra, 19a.

The Court of Appeals also found that "Illinois would use the federal safety regulations as the applicable standard of care in public liability actions". App., infra, 28a. The Court rejected arguments that Darling vs. Charleston Hospital, 33 Ill.2d 326, 211 N.E.2d 253 (1965), cert. denied, 383 U.S. 946 (1966), mandates that in Illinois the regulation can be used only as evidence of the standard of care and not the standard itself.

REASONS FOR GRANTING THE WRIT

The Court of Appeals' decision in this case holds a federal statute constitutional through an unwarranted construction and misapplication of Supreme Court precedent. App., infra, 1a. Moreover, in applying substantive state law, the Court of Appeals' decision conflicts with state law as promulgated by the Illinois Supreme Court. App., infra , 1a. The decision of the Court of Appeals is erroneous on both issues.

I. 42 U.S.C., Sec. 2210(n)(2) of the Price-Anderson Amendment Act of 1988 Unconstitutionally Grants Exclusive Federal Jurisdiction of State Based Tort Claims to the Federal Court Regarding a Nuclear Exposed Worker

Congress' enactment of 42 U.S.C., Sec. 2210(n)(2) exceeded the scope of Article III of the United States Constitution by granting federal courts subject matter jurisdiction over public liability actions through the Act. The hollow grant of federal jurisdiction in Section 2210(n)(2) does not create a case arising out of a federal statute as no federal cause of action was created. The Act simply fails to satisfy the "arising under" jurisdictional requirement of Article III, Section 2, Clause 1 of the Constitution. "Congress may not expand the jurisdiction of the federal courts beyond the bounds established by the Constitution." Verlinden B.V. vs. Central Bank of Nigeria , 461 U.S. 480, 491 (1983). The landmark cases addressing "arising under", Osborn vs. Bank of United States, 22 U.S. 738 (1824) and Verlinden B.V. vs. Central Bank of Nigeria, supra, are supportive in finding that there is no federal substantive law for "arising under" jurisdiction. D The Supreme Court in Osborn, supra, used the following test to determine "arising under" jurisdiction:

> "If it be a sufficient foundation for jurisdiction, that the title or right set up by the party, may be defeated by one construction of the constitution or law of the United States, and sustained by the opposite construction, provided the facts necessary to support the action be made out, then all the other questions must be decided as incidental to this, which gives that jurisdiction." Osborn at page 822.

In Osborn, supra, every act of the Bank grew out of the law and was tested by it; thus, federal jurisdiction was within the scope of Article III "arising under" jurisdiction. Likewise, the Federal Sovereign Immunities Act which was the focus of the Court in Verlinden, supra, constitutionally created federal jurisdiction. In Verlinden, the fed-

eral law provided the cause of action and that cause of action could be defeated depending on the construction of federal law. If the cause of action could not be brought under the federal statute, the suit was barred from adjudication in any other court in the United States.

Applying the Osborn test, the Court of Appeals found that the Act constitutionally vests the District Court with jurisdiction. This decision was based upon the court's conclusion that the Act created a new federal cause of action. App., infra, 15-16a. Petitioner disagrees, however, because the Act does not embody federal substantive law and cannot satisfy the broad "arising under" tests as decided by the Osborn and Verlinden decisions. The right at issue in this case is created by state law and exists regardless of the provisions of the Act. The Act amounts to a hollow grant of jurisdiction from Congress to the federal courts.

The relevant portions of the Act only codify that public liability actions arising out of nuclear incidents can be removed to federal district court. 42 U.S.C., Sec. 2210(n)(2). Public liability action is defined in Section 2014(hh) and provides that substantive state law will control the decision. The petitioner's cause of action at issue is the right to recover damages for alleged tortious conduct. In this case, the petitioner not only always had the cause of action against the defendants apart from the Act but also the Act contains no substantive federal law language. 42 U.S.C., Sec. 2014(hh). The Act specifically states that the law of the state in which the nuclear incident occurs will govern the rules for decision; consequently, Congress has not codified the standards governing personal injury actions resulting from nuclear incidents an aspect of federal law. In fact, no codification is possible by the Act itself which precludes a "standard" because of the variances in state tort laws.

Differing constructions of the Act would only affect the forum in which such action is maintained. The Court of Appeals found that a court's determination of whether the

alleged injuries constituted a "public liability action" arising out of a nuclear accident is a federal element of the cause of action to support "arising under". App., infra, 15-16a. According to the Court of Appeals, if the cause of action does not satisfy the definition of "public liability action", the petitioner has no cause of action in any forum: federal or state. However, the text of the statute fails to provide any support for this conclusion. The statute defines a "public liability" as any legal liability. 42 U.S.C., Sec. 2014(w). Any legal liability is determined by application of state law. 42 U.S.C., Sec. 2014(hh). Even if it was determined that an action did not amount to a "public liability action" under federal law, there is no statutory language preventing an action from being brought in state court. In the state court, the same substantive law will be applied that would have been applied had the action qualified as a "public liability action" in federal court.

The fact that the federal government has legislated in the area of nuclear power does not automatically establish federal preemption. The statute must, in fact, preempt state law. The lower courts have attempted to premise preemption on the basis that federal law may be implicated or applied. If this position were accepted, the federal courts would be flooded with lawsuits whereby the party simply implicates a federal law. For example, federal jurisdiction over workplace injuries might be necessary to further the goals and standards of OSHA. Virtually any type of case could be conferred federal jurisdiction.

It is also argued that the Act incorporates other federal elements to this cause of action such as the right to receive damages, indemnifications procedures and determinations of consistency between state and federal law. App., infra, 9a, 18-19a. The mere presence of a federal issue in a state cause of action is insufficient to create federal question jurisdiction. Merrill Dow Pharmaceutical, Inc. vs. Thompson, 478 U.S. 804 (1986). These provisions do not point to substantive provisions in the Act pertaining to duty, breach of duty, proximate cause or damage. To

answer these issues, reference must be made to the state law. These sections of the Act primarily are procedural or apply to ancillary matters of compensatory damages; nowhere does the Act defeat the action that is viable under state law. For example, even if a compensation damages fund did not exist, the petitioner would still be able to recover damages; the only difference being the damages would come from the defendant and not the United States government. Furthermore, the court's assessment of whether state law is consistent with the Act relates only to these procedural or ancillary matters.

The Court of Appeals also improperly considered elements that only relate to ENOs. App., infra, 9a, 18-19a. In the instance of an ENO, the Act mandates that normally available defenses be waived. 42 U.S.C., Sec. 2210(n)(1). In effect, strict liability is imposed in the case of an ENO. However, this issue is not germane to nuclear incidents. In the case of a "nuclear incident", normally available defenses are not waived. The Court of Appeals is clearly misguided and their reliance on ENO language illustrates the incorrect construction of the statute by the Court of Appeals.

Although the Court of Appeals wrongly relied on the ENO language, it provides an opportunity to illustrate the difference between a statute that does and does not "arise under" the Constitution or laws of the United States. ENO law aptly represents a situation where federal subject matter jurisdiction would be appropriate. Section 2210(n)(1) codifies strict liability as the legal cause of action for ENOs. Congress has created a federal cause of action which would survive the "arising under" test. On the contrary, Congress has not codified the standards for injuries due to "nuclear incidents". Instead, the standards governing nuclear incidents will be determined by the laws of the state in which the nuclear incident occurred. Consequently, the nuclear incident provision fails the "arising under" test.

The Court of Appeals, moreover, improperly relied on

legislative history that indicated Congress considered the constitutionality of its course of action. App. infra, 15a. In addressing constitutional considerations, the House Committee on Interior and Insular Affairs stated:

> "[t]he Committee believes that conferring on the Federal Courts jurisdiction over claims arising out of all nuclear incidents in this manner is within the Constitutional authority of Congress...." App., infra, a (quoting H.R. Rep. No. 104, 100th Cong., 1st Sess., pt. 1).

Congress made the fatal assumption it could make a lawsuit arise under federal law by simply "deeming" it so although the source of the law was solely state law. While some deference can be given to legislative history of this kind, the Court of Appeals wrongly found a strong presumption in favor of constitutionality because Congress considered the constitutionality issue. Realistically, Congress will never report that a particular piece of new legislation is unconstitutional. Determinations of whether federal statutes are constitutional are reserved for the judicial, not the legislative branch.

Furthermore, the Court of Appeals incorrectly found pre-Amendments Act cases as irrelevant to an Article III challenge. Stibitz vs. General Pub. Util. Corp., 746 F.2d 993, 997 (3d Cir. 1984), Commonwealth of Pennsylvania vs. General Public Utilities Corporation, 710 F.2d 117 (3d Cir. 1983) and Klick vs. Metropolitan Edison Co., 784 F2d 490 (3d Cir. 1986). App., infra, 19a. These cases were all the result of TMI "nuclear incidents". In all three cases, the court held the public liability actions did not "arise under" and consequently did not have federal subject matter jurisdiction. The courts removed all three cases upon the basis that state law decided the issue. Congress reacted to the decisions in the above cases by amending the Act to allow defendants to remove "nuclear incident" cases to federal court. Since the amendments essentially overruled those decisions, the Court of Appeals found these cases provided no support for this case. App., infra, 19a.

In drawing this conclusion, the Court of Appeals directed attention to the amendments conferring federal jurisdiction.

However, the amended Act failed to confer proper subject matter jurisdiction. The relevant part provided for removal of nuclear incident cases to federal district court. The other amendments were procedural, ancillary, or nongermane to this issue. The amended Act failed to create a federal cause of action or at least substantive federal law. Congress accomplished its purpose in affording defendants a forum in federal courts. Congress, however, failed to realize that the forum in federal court requires the action to "arise under" the federal law. Therefore, pre-Amendments Act cases continue to be relevant because the Act has not been substantively amended since those cases were decided. "Public liability actions" are still decided by state law as they were before the amendments of 1988.

The constitutional challenge under Article III was accepted by the Untied States District, M.D. Pennsylvania, in the case of In Re TMI Coordinated Proceedings, 735 F.Supp. 640 (1990); however, the Third Circuit reversed, 940 F.2d 832 (1991) the lower court's decision. The Petitioner respectfully submits the Third Circuit is in error and the district court's opinion in TMI, supra, is well-reasoned and logical, and it presents the correct argument that the Act unconstitutionally grants federal jurisdiction. In this case, the Court of Appeals adopted the decision of the Third Circuit and it is this reason that Petitioner finds the Third Circuit's ruling is also in error.

In summary, the Court of Appeals correctly acknowledged "[the] central teaching of Osborn is that a case cannot be said to arise under a federal statute where that statute is nothing more than a jurisdictional grant". App., infra, a. The right at issue in this case is not susceptible to defeat by differing constructions of the Act. Differing constructions of the Act would only affect the forum in

which such an action is maintained. Section 2210(n)(2) is nothing more than a jurisdictional grant. Accordingly, both the language of the statute and Supreme Court precedent contradict the Court of Appeals' decision. This Court should grant the appellant's petition and reverse the Court of Appeals' decision concerning the Act's federal subject matter jurisdiction.

II. Compliance with Federal Nuclear Safety Standards is merely Evidence of Due Care and Not Conclusive on this Issue when Applying State Substantive Law

If this case were constitutionally removed from state court, substantive state law provides the governing law for determining the case on the merits. The Court of Appeals held, under Illinois law, federal nuclear safety regulations are the conclusive standard for due care in "public liability actions". App. infra, 28, and see 10 C.F.R., Sec. 20.101. However, under Illinois common law negligence, it is axiomatic that regulations and standards of an administrative body are evidence of, but not conclusive of, the standard of care. The holding by the Court of Appeals directly conflicts with Illinois substantive law and is clearly erroneous. Consequently, the federal safety standards should have constituted only evidence of due care.

The Illinois Supreme Court in 1965 set forth the fundamental principle regarding the role of regulations in negligence cases in Darling vs. Charleston Hospital, 33 Ill.2d 326, 211 N.E.2d 253 (Ill. 1965), cert. denied, 383 U.S. 946 (1966).

> In the present case the regulations, standards, and bylaws which the plaintiff introduced into evidence, performed much the same function as did evidence of custom. This evidence aided the jury in deciding what was feasible and what the defendant knew or should have known. It did not conclusively determine the standard of care and the jury was

not instructed that it did. Darling, supra, at 322. (emphasis added)

The factual circumstances do not change the principle so long as the tort is based in negligence; thus, the fact that Darling, supra, was a medical malpractice claim is of no distinguishing importance.

Whenever the claim is based upon negligence, the duty is one of due care; i.e., the traditional reasonable man standard. Multiple evidentiary factors are admissible to determine violation of and/or compliance with the duty of care.

The Illinois Pattern Jury Instructions adopted by the Illinois Supreme Court, leave no doubt that these regulations and standards are evidence of the parties' conduct relative to the standard of care, but do not constitute the standard of care. I.P.I. 60.01. The jury instruction instructs the jury that it can consider violation of a regulation with all the other facts in determining whether a party was negligent. I.P.I. 60.01.

The Darling principle is to entrenched in Illinois law that it applies to strict liability actions for products liability; the defendant should be allowed to show that its product conforms with governmental safety standards. Rucker vs. Norfolk & Western Railroad Co., 77 Ill.2d 434, 396 N.E.2d 534 (1979). However, the Illinois Supreme Court expressly ruled in Rucker, supra, that the federal standards were not conclusive on the duty owed:

> The finder of fact may conclude that a product is in an unreasonably dangerous defective condition notwithstanding its conformity to Federal standards. Rucker, supra, at 440.

Conversely, the Court of Appeals held that Rucker impliedly permits the use of federal regulations as the measure of duty when there is evidence of federal preemption. App., infra, 25-26a. This interpretation of Rucker is a strained attempt to find a scintilla of Illinois law permitting the use of regulatory standards as the conclusive measure of due care. However, the Rucker court

continued to use the Darling principle for regulatory standards. The fact is that Illinois has never adopted the position of the Court of Appeals and regulatory standards have always been evidence of due care, not conclusive.

The Court of Appeals' reliance upon the Restatement(2d) of Torts, Section 286, as evidence of Illinois law permitting regulatory standards to determine due care is also misplaced. App. infra, 25a. The Illinois Supreme Court in Davis vs. Marathon Oil Co., 64 Ill.2d 380, 356 N.E.2d 93 (1976), did not rule that application of Section 286 leads to a conclusive use of regulations as the duty. Rather, the Supreme Court simply adopted Darling, supra, and applied I.P.I. 60.01 to administrative rules, regulations and orders. Moreover, Section 286 by its very language, reflects that the regulation must be viewed as one standard to measure what constitutes a reasonable man: "The Court may adopt as a standard of conduct of a reasonable man the requirements of a legislative enactment or administrative regulation..." Restatement(2d) of Torts, Sec. 286. Illinois has never adopted the aforesaid Restatement as a substitute for the Darling principle; rather, the Restatement merely reflects that administrative regulations may be indicia of the reasonable man.

According to the Court of Appeals, even if Illinois does not permit the use of the regulatory standard as conclusive of due care, "..... the federal regulations must provide the sole measure of the defendant's duty in a public liability cause of action." App., infra, 28a. The Court of Appeals reasoned that federal law in the field of nuclear safety may preempt state tort law and any other application of the federal regulations would be inconsistent with the Act. App., infra, 28-29a. However, it is the Court of Appeals' ruling that is inconsistent with the Act.

The conclusion by the Court of Appeals is incorrect by the very language of the Act. Section 2014(hh) states that the Act provides that public liability actions are to be determined in accordance with the law of the state in which the nuclear incident occurred, unless such laws are

inconsistent with the provisions of the Act.

The only Section of the Act which specifically addresses duty is the provision providing for strict liability in ENOs. There is no language in the Act adopting the regulatory standards as the measure of due care. If Congress intended for the regulations to preempt state negligence law, the language providing for the substantive rules of decision to be derived form state law would have very little meaning. The regulations would replace state negligence law as the standard for decision-making. Furthermore, if Congress intended complete preemption, then it should have enacted legislation incorporating the regulations, not substantive state law. There is no provision of the Act, therefore, applicable to Petitioner's claim which sets forth a duty which would usurp the common law negligence of Illinois.

The conflicting result reached by the Court of Appeals has far reaching implications for other safety related areas regulated by both the state and federal government. Compliance with federal or state standards has never been held to be conclusive of the issue of due care in Illinois in satisfaction of defendants' responsibility. If the Court of Appeals' decision is allowed to stand, then compliance with standards would bar most product liability and negligence actions involving motor vehicles, electric appliances, cosmetics, drugs, hospitals, nursing homes, railroads, and a host of other state-federal regulated industries. The Court of Appeals' decision encourages defendants to forum shop by seeking protection in the federal court system. Therefore, the Court should grant the Petition to resolve the conflict between the Seventh Circuit Court of Appeals' decision and Illinois law as repeatedly stated by the Illinois Supreme Court and correct the Court of Appeals' error.

CONCLUSION

The Price Anderson Amendments Act of 1988 unconstitutionally grants exclusive federal jurisdiction to the federal court. There is no substantive federal law to constitute "arising under". Rather, Congress unconstitutionally deemed jurisdiction without substance. Speculative implication is insufficient to base federal jurisdiction.

The Act was intended solely for the limited events created by the Three Mile Island incident. One nuclear worker exposed to nuclear radiation during the construction repair of a nuclear plant is certainly not what the legislature history identified when enacting the Amendment.

If any federal cause of action is created, it is one of strict liability and purely indemnification. Otherwise, state law applies and this would include Illinois law relative to the relationship of governmental standards to duty. The standards are merely evidence of but not conclusive of the duty.

For the foregoing reasons, the Petition for a Writ of Certiorari should be granted.

Respectfully submitted,

JAMES RICHARD O'CONNER,
Plaintiff-Appellant

BY _____
JAY H. JANSSEN, one of
his Attorneys

APPENDIX A

In the

United States Court of Appeals

For the Seventh Circuit

No. 92-2989

JAMES R. O'CONNER,

Plaintiff-Appellant,

v.

COMMONWEALTH EDISON COMPANY and
LONDON NUCLEAR SERVICES, INC.,

Defendants-Appellees,

and

UNITED STATES OF AMERICA,

Intervenor-Appellee.

Appeal from the United States District Court
for the Central District of Illinois, Peoria Division.
No. 89-C-1272—Michael M. Mihm, *Judge.*

ARGUED FEBRUARY 17, 1993—DECIDED JANUARY 7, 1994

Before RIPPLE and MANION, *Circuit Judges*, and SHADUR, *District Judge.**

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* The Honorable Milton I. Shadur, District Judge of the United States District Court for the Northern District of Illinois, is sitting by designation.

RIPPLE, *Circuit Judge*. James O'Conner originally brought this suit in Illinois state court. He sought damages for personal injuries allegedly caused by unsafe dosages of radiation. Shortly before trial, the action was removed to federal district court under the Price-Anderson Amendments Act, 42 U.S.C. §§ 2014, 2210 (the "Amendments Act"). Defendants Commonwealth Edison Co. ("Commonwealth Edison") and London Nuclear Services ("London Nuclear") then moved for summary judgment. The district court granted the defendants' motion. Mr. O'Conner appealed. We now affirm.

I
BACKGROUND

A. *Facts*

Mr. O'Conner was a pipefitter who performed work in September and October of 1983 at a nuclear facility operated by Commonwealth Edison. During this period, Mr. O'Conner was employed by Morrison Construction Company, a subcontractor at the plant. At the time of his alleged overexposure, he was performing services for London Nuclear, a contractor of the plant. His actions while at the plant were controlled extensively by Commonwealth Edison because his particular pipefitting work was performed in areas containing radioactive materials. These areas were designated as radiation controlled areas and access was limited to only those radiation workers who had been trained specially to work in such an area. Mr. O'Conner had received training as a radiation worker. Even after this training, however, he was required to read and sign a Radiation Work Permit before he could enter a radiation controlled area. The work permit reported the actual levels of radiation in the area and specified how the worker must dress and what radiation measuring devices the worker must wear while doing work in the area. Mr. O'Conner adhered to these requirements at all times while in the area.

At the time Mr. O'Conner allegedly was overexposed to radiation, he was wearing three different types of dosimeters, scientific instruments that measure radiation dosage. According to the dosimeters, Mr. O'Conner received a dose of 45 millirems on the night of the alleged excessive dose. Federal regulations allow a worker to receive 12,000 millirems (or 12 rems) of radiation per year. Mr. O'Conner never defines what he considers to be an "excessive dose" but claims that he was overexposed because he felt warm while working. About ten months later, Mr. O'Conner was diagnosed with early posterior sucapsular cataracts by Dr. Karl Scheribel. It is Dr. Scheribel's opinion that the cataracts were caused by radiation because radiation-induced cataracts are so unique that they can be identified merely by observation. However, all experts agree that the minimum dose necessary to cause cataracts is 200 rems, well above the .045 rem dose that Mr. O'Conner received on the night of October 3, 1983.

In 1985, Mr. O'Conner brought this action in the Circuit Court of the Tenth Judicial Circuit of Illinois, Tazewell County. In a two-count complaint, Mr. O'Conner alleged that he had been exposed negligently to radiation as a result of the pipe-flushing procedure being conducted by London Nuclear for Commonwealth Edison. Just prior to trial, however, Congress enacted the Price-Anderson Amendments Act of 1988. The Amendments Act expanded federal jurisdiction for public liability actions to encompass "any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation." 42 U.S.C. § 2014(w). The Amendments Act also allowed for removal of public liability actions currently pending in state courts. Pursuant to this second provision, the defendants filed a Petition for Removal. The petition was granted over Mr. O'Conner's objection.

B. *District Court Proceedings*

In the district court, the defendants moved for a determination of the legal duty owed to Mr. O'Conner under

the Amendments Act. The district court determined that the maximum permissible radiation dose levels set by federal safety standards provide the applicable standard of care. Furthermore, the district court opined, even if Illinois would not use federal safety standards as the standard of care in this situation, a different state standard would be preempted by federal law. *O'Conner v. Commonwealth Edison Co.*, 748 F. Supp. 672, 678 (C.D. Ill. 1990).

Mr. O'Conner then filed a motion asking the district court to remand the case to state court. He argued that the Amendments Act unconstitutionally conferred jurisdiction on the federal courts. He further argued that the retroactive application of these provisions violated due process. The district court disagreed. It held that Congress had created the public liability cause of action as a federal cause of action with a state law basis, similar to what Congress had done in the Outer Continental Shelf Lands Act, 43 U.S.C. § 1331 [OCSLA]. Furthermore, the district court believed that the other federal ingredients of the statutory scheme provided a sufficient basis for federal jurisdiction under the broad tests of *Osborn v. Bank of United States*, 22 U.S. (9 Wheat.) 738 (1824), and *Verlinden B.V. v. Central Bank of Nigeria*, 461 U.S. 480 (1983). The district court also held that removal did not violate due process. Because the Amendments Act is essentially economic legislation, the district court determined that "[t]he validity of . . . the removal mechanism . . . depends on whether such retroactive application is a rational means of achieving a legitimate congressional purpose." *O'Conner v. Commonwealth Edison Co.*, 770 F. Supp. 448, 456 (C.D. Ill. 1991). The district court determined that retroactive application of the removal provisions was a rational means to accomplish congressional purposes.

Prior to these motions, the defendants had moved for summary judgment on the ground that there was no evidence that the plaintiff had received a dose in excess of the federal permissible dose limits, and on the ground that

there was no evidence that the plaintiff's occupational radiation exposure caused any injuries to the plaintiff. The plaintiff filed his response, which included the deposition testimony of Dr. Karl Scheribel. Dr. Scheribel testified that only radiation could have caused the plaintiff's cataracts. However, Dr. Scheribel did not include an affidavit that explained the basis of his opinion with respect to causation. The plaintiff was allowed to file supplemental affidavits and information regarding the basis of Dr. Scheribel's opinion. Mr. O'Conner filed a short affidavit from Dr. Scheribel which listed the names of four articles that formed the scientific basis of his opinion. Based on these representations, the district court first denied the defendants' motion for summary judgment on the ground that a genuine issue of material fact existed regarding whether the plaintiff had received a dose in excess of the federal dose limits. However, on August 29, 1991, after reconsidering the issue of admissibility of Dr. Scheribel's testimony sua sponte, the district court determined that Dr. Scheribel's testimony was inadmissible and entered judgment in favor of the defendants.

Mr. O'Conner appeals from the entry of summary judgment. He renews on appeal the arguments made to the district court. Specifically, he alleges that the district court erred in not remanding the case to the state court and in applying the Amendments Act retroactively. He also maintains that the district court improperly determined the applicable standard of care for a public liability action. Finally, Mr. O'Conner reasserts the admissibility of Dr. Scheribel's testimony to establish causation. We address each of these in turn.

II
ANALYSIS

A. *Jurisdiction*

The plaintiff first maintains that the district court should have remanded the case to the state court. Mr. O'Conner argues that 42 U.S.C. § 2210(n)(2), which allows for

removal of public liability actions, does not create a federal cause of action and is therefore a hollow grant of federal jurisdiction. Specifically, Mr. O'Conner maintains that, because the governing law for public liability actions is derived from state law rather than from a newly-created body of federal law, the cause of action does not arise under a law of the United States; instead, the public liability action arises under state law. Consequently, the removal provisions do not satisfy the requirement of Article III that causes of action "arise under" the Constitution or laws of the United States.

1.

In order to evaluate properly its constitutionality, we must look at the Amendments Act in the context of the entire federal statutory scheme on nuclear power. The Amendments Act is simply the last addition to the federal law of nuclear energy that has been evolving since 1946 when Congress enacted the Atomic Energy Act. The Atomic Energy Act initially gave the federal government a monopoly with respect to the development of nuclear power. Later, however, Congress determined that the national interest would be served by including the private sector in the development of atomic energy. Thus, Congress enacted the Atomic Energy Act of 1954 which established the Atomic Energy Commission and gave it authority to license and regulate nuclear facilities. *See* 42 U.S.C. §§ 2211-2281. However, this legislation alone did not spur the private sector into the industry. "[S]pokesmen for the private sector informed Congress that they would be forced to withdraw from the field if their liability were not limited by appropriate legislation." *Duke Power Co. v. Carolina Envtl. Study Group, Inc.*, 438 U.S. 59, 64 (1978). Congress responded in 1957 with the Price-Anderson Act for the purpose of "protect[ing] the public and . . . encourag[ing] the development of the atomic energy industry." 42 U.S.C. § 2012. The Price-Anderson Act had three main features: 1) It "established a limit on the aggregate liability of those who wished to undertake activities involving the handling

or use of radioactive materials"; 2) It channelled public liability resulting from nuclear incidents to the federal government; and 3) It established that all public liability claims above the amount of required private insurance "protection would be indemnified by the Federal Government, up to the aggregate limit on liability." S. Rep. No. 218, 100th Cong., 1st Sess. 2 (1987), *reprinted in* 1988 U.S.C.C.A.N. 1476, 1477 [hereinafter S. Rep. No. 218].

In 1966, the Price-Anderson Act, due for expiration, was extended for ten years. In addition, a new provision required that those indemnified waive common law defenses in the event of an action arising from an extraordinary nuclear occurrence ("ENO"). "The 1966 Amendments also provided for the transfer, to a federal district court, of all claims arising out of an [ENO]. 42 U.S.C. § 2210(n)(2)." *In re TMI Cases Consolidated II*, 940 F.2d 832, 852 (3d Cir. 1991), *cert. denied*, 112 S. Ct. 1262 (1992). These provisions were premised on

> congressional concern that state tort law dealing with liability for nuclear incidents was generally unsettled and that some way of insuring a common standard of responsibility for all jurisdictions—strict liability—was needed. A waiver of defenses was thought to be the preferable approach since it entailed less interference with state tort law than would the enactment of a federal statute prescribing strict liability.

Duke Power, 438 U.S. at 65-66.

The Price-Anderson Act was amended a second time in 1975 and again in 1988 by the Amendments Act. The decision to amend and extend the Price-Anderson Act arose from congressional recognition that

> [t]he Price-Anderson System, including the waiver of defenses provisions, the omnibus coverage, and the predetermined sources of funding, provides persons seeking compensation for injuries as a result of a nuclear incident with significant advantages over the procedures and standards of recovery that might otherwise be applicable under State tort law. The Act also

> provides a mechanism whereby the federal government can continue to encourage private sector participation in the beneficial uses of nuclear materials.

S. Rep. No. 218 at 4. Among other provisions, the Amendments Act expanded the reach of 42 U.S.C. § 2210(n)(2) to provide for removal of, and original federal jurisdiction over, claims arising from any "nuclear incident," instead of actions arising only from ENOs. The amended section reads:

> With respect to any public liability action arising out of or resulting from a nuclear incident, the United States district court in the district where the nuclear incident takes place, or in the case of a nuclear incident taking place outside the United States, the United States District Court for the District of Columbia, shall have original jurisdiction without regard to the citizenship of any party or the amount in controversy. Upon motion of the defendant or of the Commission, or the Secretary, as appropriate, any such action pending in any State court (including any such action pending on [the date of the enactment of the Price-Anderson Amendments Act of 1988]) or United States district court shall be removed or transferred to the United States district court having venue under this subsection. Process of such district court shall be effective throughout the United States.

42 U.S.C. § 2210(n)(2). The Amendments Act also added § 2014(hh) to the definition section. This section defines a public liability action as "any suit asserting public liability."[1] In addition to defining the cause of action, this sec-

[1] The definition of public liability, "any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation," 42 U.S.C. § 2014(w), was not affected by the 1988 amendments. Although the definition of nuclear incident was altered slightly by the Amendments Act, the parts of that definition pertinent to this case remained constant:

(Footnote continued on following page)

tion grants federal courts jurisdiction to adjudicate public liability claims:

> A public liability action shall be deemed to be an action arising under section 2210 of this title, and the substantive rules for decision in such action shall be derived from the law of the State in which the nuclear incident involved occurs, unless such law is inconsistent with the provisions of such section.

42 U.S.C. § 2014(hh). This provision of the Amendments Act was designed to overturn decisions in which the Third Circuit had held that "federal courts do not have subject matter jurisdiction for claims arising out of a non-ENO nuclear incident. *Stibitz v. GPU*, 746 F.2d 993 (3d Cir. 1984), cert denied, 105 S. Ct. 1187 (1985)." S. Rep. No. 218 at 13. The Senate Committee on Environment and Public Works made clear in its report, as well as in the language of the statute, that the new cause of action arose under the Act: "Any suit asserting public liability shall be deemed to be an action arising under the Price-Anderson Act." *Id.*

Although the public liability cause of action is built around preexisting state law, it contains some distinctively federal elements as well. The Amendments Act dictates the limitations period for a public liability cause of action, 42 U.S.C. § 2210(n)(1), provides for venue, § 2210(n)(2), limits the availability of punitive damages in an action arising out of an ENO, § 2210(s), and mandates that normally-available defenses be waived in the cases of ENOs, § 2210(n)(1). The Amendments Act, therefore, forms the state-based cause of action into the federal mold.

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[1] *continued*

> The term "nuclear incident" means any occurrence, including an extraordinary nuclear occurrence, within the United States causing, within or outside the United States, bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material . . . .

42 U.S.C. § 2014(q).

Thus, the Amendments Act is the latest installment in nearly fifty years of congressional work. During that time, Congress has attempted to encourage the development of domestic nuclear power to the fullest extent through licensing, indemnification, limitation of liability, and consolidation of litigation. Nevertheless, Congress has balanced this encouragement of private sector activity with an acute concern for public safety by authorizing extensive regulation first by the Atomic Energy Commission, and now by the Nuclear Regulatory Commission, and by imposing a carefully constructed measure of liability should nuclear accidents occur. It is against this statutory background that challenges to the constitutionality of the Amendments Act must be evaluated. We turn now to that constitutional issue.

2.

a. the constitutional standard

The Constitution of the United States confers limited jurisdiction on the federal courts. Article III provides that the judicial power of the United States "shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority." Causes of action that are based entirely on federal law clearly arise under the laws of the United States for Article III purposes. However, when state and federal elements are present in the same cause of action, the analysis is necessarily more complex. We therefore turn to an examination of the caselaw discussing Article III "arising under" jurisdiction[2] in situations presenting both state and federal law questions.

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[2] The "arising under" language also appears in the statute which authorizes district courts to hear cases involving federal questions. It states: "The district courts shall have original jurisdiction of all civil actions arising under the Constitution, laws, or treaties

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Our analysis begins with *Osborn v. Bank of the United States*, 22 U.S. (9 Wheat.) 738 (1824), in which the Supreme Court first articulated the constitutional test for Article III "arising under" jurisdiction. *Osborn* involved a suit brought by the bank to prevent Ohio's state auditor from collecting a tax levied against the bank. The statute which had incorporated the bank also authorized it "to sue and be sued . . . in any Circuit Court of the United States." *Id.* at 817. The Court held that the act of incorporation made the case one "arising under" the laws of the United States. In doing so, the Court articulated the following oft-quoted standard: "[It is a] sufficient foundation for jurisdiction, that the title or right set up by the party, may be defeated by one construction of the constitution or law of the United States, and sustained by the opposite construction . . . ." *Id.* at 822. The presence of a state law issue did not destroy federal jurisdiction. When federal law, continued the Court, "forms an ingredient of the original cause, it is in the power of Congress to give the Circuit Courts jurisdiction of that cause, although other questions of fact or law may be involved in it." *Id.*

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[2] *continued*

of the United States." 42 U.S.C. § 1331. Although they contain identical language, the two provisions have been interpreted differently.

> Section 1331 . . . although broadly phrased,
>
> > has been continuously construed and limited in light of the history that produced it, the demands of reason and coherence, and the dictates of sound judicial policy which have emerged from the [statute's] function as a provision in the mosaic of federal judiciary legislation.

Verlinden B. V. v. Central Bank of Nigeria, 461 U.S. 480. 495 (1983) (quoting *Romero v. International Terminal Operating Co.*, 358 U.S. 354, 379 (1959)). The statutory grant is much narrower than the constitutional grant. Under the statutory grant, a case arises under federal law only if, from the face of the plaintiff's complaint, it is apparent that the plaintiff's cause of action was created by federal law. *Louisville & Nashville R.R. v. Mottley*, 211 U.S. 149. 152 (1908).

at 823. As Judge Mansmann wrote for the Third Circuit in *In re TMI Cases Consolidated II*,

> The central teaching of *Osborn*, therefore, is that a case cannot be said to arise under a federal statute where that statute is nothing more than a jurisdictional grant. In order to confer "arising under" jurisdiction, "the act [may] not stop with incorporating the Bank;" it must do more.

940 F.2d 832, 849 (3d Cir. 1991), *cert. denied*, 112 S. Ct. 1262 (1992).

More recently, the Court has addressed the issue of "arising under" jurisdiction in *Verlinden B.V. v. Central Bank of Nigeria*, 461 U.S. 480 (1983). In *Verlinden*, the Court evaluated the constitutionality of the Foreign Sovereign Immunities Act ("FSIA"), which authorizes a foreign plaintiff to sue a foreign state in federal district court on a nonfederal cause of action. However, this jurisdiction is contingent upon the district court's finding that one of the statutorily prescribed exceptions to foreign sovereign immunity applies. In evaluating the FSIA's constitutionality, the Court first reviewed the standard established in *Osborn*:

> *Osborn* . . . reflects a broad conception of "arising under" jurisdiction, according to which Congress may confer on the federal courts jurisdiction over any case or controversy that might call for the application of federal law. . . . It has been observed that, taken at its broadest, *Osborn* might be read as permitting "assertion of original federal jurisdiction on the remote possibility of presentation of a federal question." We need not now resolve the issue or decide the precise boundaries of Art. III jurisdiction, however, since the present case does not involve a mere speculative possibility that a federal question may arise at some point in the proceeding. Rather, a suit against a foreign state under this Act necessarily raises questions of substantive federal law at the very outset, and hence clearly "arises under" federal law, as that term is used in Art. III.

Id. at 492-93. The FSIA requires federal courts, in the first instance, to determine whether one of the enumerated exceptions to foreign sovereign immunity applies. Only if an exception applies is jurisdiction appropriate. This determination, held the Court, is sufficient for "arising under" jurisdiction. There is more than a "speculative possibility" that a federal question may arise. *Verlinden*, 461 U.S. at 492.

The Court then contrasted the circumstances in which "arising under" jurisdiction would be lacking. It distinguished the FSIA from acts which, without any other exercise of federal legislative power, merely grant jurisdiction to the federal courts. The Court stated:

> As the Court stated in *The Propeller Genessee Chief*: "The law . . . contains no regulations of commerce . . . . *It merely confers a new jurisdiction on the district courts; and this is its only object and purpose.* . . . It is evident . . . that Congress, in passing [the law], did not intend to exercise their power to regulate commerce . . . ."
>
> In contrast, in enacting the Foreign Sovereign Immunities Act, Congress expressly exercised its power to regulate foreign commerce, along with other specified Art. I powers. As the House Report clearly indicates, the primary purpose of the Act was to "se[t] forth comprehensive rules governing sovereign immunity"; the jurisdictional provisions of the Act are simply one part of this comprehensive scheme. The Act thus does not merely concern access to the federal courts. Rather, it governs the types of actions for which foreign sovereigns may be held liable in the United States, federal or state.

Id. at 496-97 (citations omitted).[3]

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[3] The Court in *Mesa v. California*, 489 U.S. 121 (1989), discussed further the idea of a purely jurisdictional statute. In *Mesa*, the Court reviewed whether allegation of a federal defense was a pre-

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Thus, more than a jurisdictional grant is required for a matter to "arise under" the Constitution or laws of the United States. Congress may not simply invoke federal jurisdiction; however, when it invokes this jurisdiction in conjunction with exercising its Article I legislative powers, the constitutional concerns are satisfied. As the Third Circuit held, "We take from *Verlinden* the proposition that where Congress has the authority to legislate in a given area and substantively does so, a grant of federal subject matter jurisdiction will survive an Article III challenge." *In re TMI Cases Consolidated II*, 940 F.2d 832, 850 (3d Cir. 1991), *cert. denied*, 112 S. Ct. 1262 (1992).

b. application

Because we believe that the Amendments Act embodies substantive federal policies and does not merely create federal jurisdiction for a state claim, we must conclude that Article III's "arising under" requirement has been

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[3] *continued*

requisite to removal under the federal officer removal statute, 42 U.S.C. § 1442(a)(1). The government urged that the statute permitted removal " 'whenever a federal official is prosecuted for the manner in which he has performed his duties . . . .' " *Mesa*, 489 U.S. at 125. The Court disagreed. It held that the federal officer removal statute was a purely jurisdictional statute

> seeking to do nothing more than grant district court jurisdiction over cases in which a federal officer is a defendant. Section 1442(a), therefore, cannot independently support Art. III "arising under" jurisdiction. Rather, it is the raising of a federal question in the officer's removal petition that constitutes the federal law under which the action against the federal officer arises for Art. III purposes.

Id. at 1489. The court preserved the test, articulated in both *Osborn* and *Verlinden*, that Article III requires only a federal ingredient: "Nor is it any objection that questions are involved which are not all of a Federal character. If one of the latter exist, if there be a single such ingredient in the mass, it is sufficient [for constitutional purposes]." *Id.* at 129 (quoting *The Mayor v. Cooper*, 73 U.S. (6 Wall.) 247, 252 (1867)).

met. At the outset, we believe it is important to note that Congress explicitly considered the constitutionality of its course of action. The House Committee on Interior and Insular Affairs specifically addressed possible constitutional concerns:

> The Committee recognizes, of course, that Article III of the Constitution limits the types of cases that federal courts created under that Article may hear. For this reason, H.R. 1414 expressly states that any suit asserting public liability shall be deemed to be an action arising under the Price-Anderson Act, thereby making suits asserting public liability "Cases * * * arising under * * * the Laws of the United States" within the meaning of Article III. . . . The Committee believes that conferring on the Federal Courts jurisdiction over claims arising out of all nuclear incidents in this manner is within the Constitutional authority of Congress . . . .

H.R. Rep. No. 104, 100th Cong., 1st Sess., pt. 1. "The customary deference accorded the judgments of Congress is certainly appropriate where, as here, Congress specifically considered the question of the Act's constitutionality." *Rostker v. Goldberg*, 453 U.S. 57, 64 (1981).

Given the strong presumption in favor of Congress' carefully considered decisions as to the constitutionality of its pronouncements and the scope of "arising under" jurisdiction established in the caselaw, we conclude that the Amendments Act constitutionally vests the district court with jurisdiction. The federal basis of the Amendments Act is at least as strong as that in *Verlinden*. Two provisions of the Amendments Act demonstrate that a public liability action "arises under" the Price-Anderson Act. First, the broad definition of "public liability action"[4] embodied in the Price-Anderson Act implies that Congress

[4] *See supra* note 2 for the definition of "public liability" and the equally broad definition of "nuclear incident" which it encompasses.

has exercised power under Article I and has enacted a new and independent, indeed exclusive, cause of action. As the Third Circuit explained in its discussion of the jurisdictional grant of the Amendments Act:

> Under the terms of the Amendments Act, the "public liability action" encompasses "*any* legal liability" of any "person who *may* be liable" on account of a nuclear incident. 42 U.S.C. § 2014(h) (emphasis added). Given the breadth of this definition, the consequence of a determination that a particular plaintiff has failed to state a public liability claim potentially compensable under the Price-Anderson Act is that he has no such claim at all. After the Amendments Act, no state cause of action based upon public liability exists. A claim growing out of any nuclear incident is compensable under the terms of the Amendments Act or it is not compensable at all. Any conceivable state tort action which might remain available to a plaintiff following the determination that his claim could not qualify as a public liability action, could not be one based on "any legal liability" or "any person who may be liable on account of a nuclear incident."

In re TMI Cases Consolidated II, 940 F.2d 832, 854 (3d Cir. 1991), *cert. denied*, 112 S. Ct. 1262 (1992). Thus, a state cause of action is not merely transferred to federal court; instead, a new federal cause of action supplants the prior state cause of action.

Furthermore, Congress provided that the law governing a public liability cause of action was to be "derived from" state law. In creating the public liability cause of action, Congress specified:

> The term "public liability action", as used in section 2210 of this title, means any suit asserting public liability. A public liability action shall be deemed to be an action arising under section 2210 of this title, and the substantive rules for decision in such action shall be derived from the law of the state in which the nuclear incident involved occurs, unless such law is inconsistent with the provision of such section.

42 U.S.C. § 2014(hh). Congress did not adopt in wholesale fashion state law. State law serves as the basis for the cause of action only as long as state law is consistent with the other parts of the Act. Congress desired that state law provide the content for and operate as federal law; however, Congress recognized that state law would operate in the context of a complex federal scheme which would mold and shape any cause of action grounded in state law. This recognition is explicit in the Amendments Act's legislative history. In discussing the need for reauthorizing the Price-Anderson Act, the Senate Committee on Environment and Public Works reported:

> The Price-Anderson system, including the waiver of defenses provisions, the omnibus coverage, and the predetermined sources of funding, provides persons seeking compensation for injuries as a result of a nuclear incident with significant advantages over the procedures and standards for recovery that might otherwise be applicable under State tort law.

S. Rep. No. 218 at 4. Thus, although the basis for a public liability cause of action is state law, the applicable law is only "derived" from state law. The Price-Anderson system, by design, alters state tort law to forward the goals of that act: to "protect the public and . . . encourage the development of the atomic energy industry." 42 U.S.C. § 2012.[5]

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[5] In choosing to adopt state law as the basis for the federal cause of action, Congress compared this to other acts based on state law. Specifically, the House Committee on Interior and Insular Affairs reported:

> Rather than designing a new body of substantive law to govern such cases, however, the bill provides that the substantive rules for decision in such actions shall be derived from the law of the state in which the nuclear incident involved occurs, unless such law is inconsistent with the Price-Anderson Act. The Committee believes that conferring on the Federal courts jurisdiction over claims arising out of all nuclear incidents in this manner is within the constitutional authority of

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In addition to Congress' manifest intent to create a new and entirely federal cause of action, there are sufficient other federal elements in this cause of action to support "arising under" jurisdiction. Before determining whether it has jurisdiction, the district court must decide, in the first instance, whether the alleged injuries arise out of a nuclear incident. This prerequisite parallels the determination that a court must make when faced with a cause of action under the Foreign Sovereign Immunities Act, a determination that, according to the *Verlinden* Court, satisfies the requirements of Article III. Additionally, if the public liability action results from an ENO, the district court then will have to apply the federal statute of limitations contained in the Amendments Act. It will also have to enforce the provisions of the Amendments Act which require the defendants to waive their state common law defenses. Finally, the court will have to assess whether the applicable state law is consistent with federal law. As the Third Circuit noted in *TMI*, the Amendments Act places great weight on the necessity of the district court's determining whether state and federal law are consistent. Because the Supreme Court had made clear that federal law completely occupies the field of nuclear safety, and consequently preempts state action in this area, the *TMI* court believed that the duty a defendant owes to a plaintiff in a public liability action similarly is dictated by

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[5] *continued*

Congress and notes that the Congress has used this approach in the Outer Continental Shelf Lands Act.

H.R. Rep. No. 104, pt. 1 at 18.

Mr. O'Conner seeks to distinguish the use of state law in the OCSLA from the use of state law in the Amendments Act. Primarily, Mr. O'Conner asserts that OCSLA is distinguishable because Congress was legislating over federal territory. Like the district court, we "believe[ ] that Congress has jurisdiction over interstate commerce [(the Amendments Act's basis for jurisdiction)] just as it has jurisdiction over federal territory. Congress would have the same power to federalize state causes of action asserting either basis for jurisdiction." *O'Conner v. Commonwealth Edison Co.*, 770 F. Supp. 448, 453 (C.D. Ill. 1991).

federal law. *TMI*, 940 F.2d at 858. Thus, any public liability action has significant federal ingredients which satisfy arising under jurisdiction.[6]

All of these federal "ingredients," *Osborn v. Bank of the United States*, 22 U.S. (9 Wheat.) 738, 823 (1824), create a cause of action "arising under" federal law.[7] The presence of these federal ingredients in the Amendments Act is particularly convincing when their significance is assessed not in a vacuum but in relation to the entire federal regulatory scheme which we have described earlier. As the Third Circuit noted in *TMI*:

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[6] We address this particular issue of duty of care for a public liability cause of action in greater detail later in the opinion. *See infra* part II.C.

[7] In supporting his position of unconstitutionality, Mr. O'Conner invites our attention to a number of pre-Amendments Act cases. *See, e.g., Stibitz v. General Pub. Util. Corp.*, 746 F.2d 993, 997 (3d Cir.) (holding that public liability action did not "arise under" pre-1988 Price-Anderson Act for Article III purposes and therefore federal court did not have subject matter jurisdiction over cause of action), *cert. denied*, 469 U.S. 1214 (1984); *Kiick v. Metropolitan Edison Co.*, 784 F.2d 490, 495 (3d Cir. 1986) (same). We do not think this assertion merits discussion at length. As demonstrated above, the Amendments Act greatly expanded the coverage of the Price-Anderson Act. Furthermore, the Amendments Act specifically created a cause of action and designated the substantive provisions, venue, choice of law, etc. *See supra* part II.A.1. Indeed, the Third Circuit explicitly stated that its pre-Amendments Act cases provided no support for an Article III challenge to the Amendments Act. That court explained:

> With the Amendments Act, however, the entire Price-Anderson landscape was transformed. Congress clearly considered the decisions of our court holding that Congress had not intended to create a federal cause of action for cases not based upon an extraordinary nuclear occurrence . . . . Congress then provided, in the Amendments Act, the clearest expression of intent that there be a federal cause of action arising directly under the Act. Despite the plaintiffs' arguments to the contrary, *Kiick*, *Stibitz*, and the other pre-Amendments Act cases provide no support for the Article III challenge made here.

TMI, 940 F.2d at 857.

> The Amendments Act creates a federal cause of action which did not exist prior to the Act, establishes federal jurisdiction for that cause of action, and channels all legal liability to the federal courts through that cause of action. By creating this federal program which requires the application of federal law, Congress sought to effect uniformity, equity, and efficiency in the disposition of public liability claims. With the federal jurisdiction and removal provisions set forth in the Amendments Act, Congress ensured that all claims resulting from a given nuclear incident would be governed by the same law, provided for the coordination of all phases of litigation and the orderly distribution of funds, and assured the preservation of sufficient funds for victims whose injuries may not become manifest until long after the incident. . . . Thus, Congress clearly intended to supplant all possible state causes of action when the factual prerequisite [sic] of the statute are met.
>
> . . .
>
> Through the Amendments Act, Congress has placed an overlay of federal law upon the rights and remedies previously available under state law. Once a federal court is satisfied that a particular suit is a public liability action, additional questions under the Amendments Act may need to be addressed. Under certain circumstances licensees may be required to waive defenses which would have been viable under state law. Punitive damage awards available under state law also may be precluded. Furthermore, in every case alleging public liability, courts will be required to determine whether state law principles conflict with other parts of the Price-Anderson scheme.

940 F.2d at 856-58. Consequently, the Amendments Act does not violate Article III.

B. *Retroactivity*

Mr. O'Conner next challenges the retroactivity provisions of the statute.[8] He argues that retroactive application of the statute violates due process because there is no "legitimate legislative purpose . . . presented by the Act." Appellant's Br. at 20. He claims that the statute was designed only for the benefit of those in the Three Mile Island ("TMI") litigation, and that therefore it is wholly irrational that he falls within the reaches of the Act.

We disagree with Mr. O'Conner's characterization of the statute's purpose and therefore with his conclusion as to its constitutionality. First, we note that Mr. O'Conner must overcome a strong presumption that the retroactive application of the statute is constitutional. "Provided that the retroactive application of a statute is supported by a legitimate legislative purpose furthered by rational means, judgments about the wisdom of such legislation remain within the exclusive province of the legislative and executive branches." *Pension Benefit Guar. Corp. v. R.A. Gray & Co.*, 467 U.S. 717, 729 (1984). Because we do not believe that Congress, in making the statute retroactive, " 'has acted in an arbitrary and irrational way,' " *id.* at 731, we uphold it against the plaintiff's constitutional challenge.

In enacting the removal provision, Congress recognized that the same problems that could arise in litigating an ENO could also occur in litigating a non-ENO nuclear incident.

> The experience with claims following the TMI accident demonstrates the advantages of the ability to consolidate claims after the nuclear incident. . . . The

[8] Section 20(b)(1) of the Amendments Act, Pub. L. No. 100-408, makes clear that the jurisdictional and standard of care provisions at issue here are applicable to all nuclear incidents occurring before, on, or after the effective date of the statute.

> availability of the provisions for consolidation of claims in the event of any nuclear incident, not just an ENO, would avoid the inefficiencies resulting from duplicative determinations of similar issues in multiple jurisdictions that may occur in the absence of consolidation.

S. Rep. No. 218 at 13. According to the legislative history, there are at least two reasons for the removal provisions which pertain to retroactive as well as prospective application of the Amendments Act. First, the removal provisions "ensure the equitable and uniform treatment of victims." H.R. Rep. No. 104, pt. 3, at 30. In addition, removal assures "the avoidance of similar issues in multiple jurisdictions that may occur in the absence of consolidation." S. Rep. No. 218 at 13. "Retroactivity guarantee[s] that all cases arising out of the same nuclear incident could be consolidated in one forum," *TMI*, 940 F.2d at 861, and thus accomplishes the purposes as set forth by the congressional committees.[9] Consequently, Mr. O'Con-

[9] Mr. O'Conner submits that, even if there is a general federal purpose accomplished by the retroactive application of the removal provisions, such as the TMI litigation, there is no federal purpose accomplished by including his case in the class of cases that can be removed, retroactively or prospectively. In fact, Mr. O'Conner's counsel suggested at oral argument that the purposes of the Price-Anderson Act would not be accomplished unless claims from an incident totalled at least $60 million, the trigger point of indemnification. However, Mr. O'Conner presents no authority that would render a statute violative of due process because it includes within its ambit cases whose adjudicative facts directly implicate identifiable interests and those whose facts do not impact as severely on the federal interest. Furthermore, although the pipe-flushing incident at Commonwealth Edison apparently did not present such a situation, it is conceivable that such an incident would spawn litigation by various individuals in various courts. In such a situation, consolidation and removal would accomplish the purposes of the Amendments Act as set forth by the committees, even if the claims did not total $60 million.

ner has not overcome the presumption in favor of the Amendments Act's constitutionality.[10]

C. *Standard of Care*

Mr. O'Conner next argues that the district court erred in determining that Illinois would apply the federal regulations as an absolute standard of care for negligence. He claims that under Illinois law "it is axiomatic that regulation and standards of an administrative body are evidence of, but not conclusive of, the standard of care." Appellant's Br. at 32. Consequently, the federal safety standards should have constituted only evidence of due care.

We begin our analysis with the statutory directive in the Price-Anderson Amendments Act. According to the statute, "the substantive rules for decision in such action shall be derived from the law of the State in which the nuclear incident involved occurs, unless such law is inconsistent with the provisions of such section." 42 U.S.C. § 2014(hh). Thus, we first look to Illinois law to determine the standard of care applicable to this cause of action.

1.

Illinois courts have spoken on several occasions regarding how regulations should be used in negligence cases.

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[10] Mr. O'Conner also maintains that the retroactivity provisions of the statute violate state sovereignty. Mr. O'Conner provides this court with scant authority for this proposition. Furthermore, it is clear that removal provisions generally do not encroach unconstitutionally upon state sovereignty. See *Tennessee v. Davis*, 100 U.S. 257, 267 (1880), stating:

> The removal of cases arising under [the laws of the United States] from State into Federal courts is, therefore, no invasion of State domain. On the contrary, a denial of the right of the general government to remove them, to take charge of and try any case arising under the Constitution or laws of the United States, is a denial of the conceded sovereignty of that government over a subject expressly committed to it.

The principal Illinois case articulating this use is *Darling v. Charleston Hospital*, 211 N.E.2d 253 (Ill. 1965), *cert. denied*, 383 U.S. 946 (1966). In *Darling*, the trial court had allowed the plaintiff to introduce hospital regulations, standards, and by-laws as evidence of the defendant hospital's negligence. The Illinois Supreme Court held that, in the case before it, standards played the same role as custom.

> "By the great weight of modern American authority a custom either to take or to omit a precaution is generally admissible as bearing on what is proper conduct under the circumstances, but is not conclusive." Custom is relevant in determining the standard of care because it illustrates what is feasible, it suggests a body of knowledge of which the defendant should be aware, and it warns of the possibility of far-reaching consequences if a higher standard is required. But custom should never be conclusive.

Darling, 211 N.E.2d at 257 (citations omitted).

The plaintiff argues that *Darling* mandates that regulations be used only as evidence of the standard of care and not the standard itself. Like the district court, however, we believe that, in the case at hand, Illinois law does not mandate such a wooden application of *Darling*. Unlike the safety regulations at issue in *Darling*, safety standards for nuclear power plants do not equate easily to custom. As the district court stated, "[c]ustom is a flexible guide for situations in which there is a margin of error." *O'Conner v. Commonwealth Edison Co.*, 748 F. Supp. 672, 676 (C.D. Ill. 1990). The regulations for nuclear power plants, however, are not flexible guides; there is no "margin of error." The regulations require strict adherence so that workers and the public are protected, and so that public utilities are not exposed to liability when workers receive noninjurious doses of radiation. Strict adherence to federal safety standards in the field of nuclear energy, unlike in other industrial or quasi-industrial settings, is a necessity. Consequently, the approach of *Darling* is not

appropriate when matters of safety in the nuclear power industry are at stake.[11]

We find instructive the Illinois Supreme Court's decision in *Rucker v. Norfolk & Western Railway Co.*, 396 N.E.2d 534 (Ill. 1979). In that case, the court addressed the role of federal regulations that specified the safety features of railroad cars in determining the standard of care. The defendants argued that the "promulgation of Federal regulations on the subject of railroad cars indicates the intention of Federal authorities that no liability should attach to manufacturers whose products are in compliance with those regulations." *Rucker*, 396 N.E.2d at 537. The Illinois Supreme Court disagreed. It stated:

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[11] Other cases suggest that Illinois law affords the federal safety regulations a more vital role in determining the standard of care than that given the regulations in *Darling*. As the district court noted, "Illinois courts have explicitly used the Restatement (2d) of Torts, § 286 to determine the proper duty where there is a regulation or other law relevant to the applicable standard of care." *O'Conner*, 748 F. Supp. at 677; *see also Davis v. Marathon Oil Co.*, 356 N.E.2d 93, 97 (Ill. 1976). Section 286 of the Restatement (2d) of Torts provides:

> The court may adopt as the standard of conduct of a reasonable man the requirements of a legislative enactment or administrative regulation whose purpose is found to be exclusively or in part (a) to protect a class of persons which includes the one whose interest is invaded, and (b) to protect a particular interest which is invaded, and (c) to protect that interest against the kind of harm that has resulted, and (d) to protect that interest against the particular hazard from which the harm results.

As the district court determined, all of these factors apply to the situation at hand: (a) the purpose of the federal regulations is to protect the worker, *see* 10 C.F.R. § 20.101; (b) the interest to be protected is the interest in not being overexposed to radiation; (c) the regulation also is designed to protect against bodily harm caused by overexposure; and (d) the regulations were enacted to protect the interest in bodily safety against the hazard of overexposure to radiation. Thus, we believe the Restatement, on which Illinois courts have relied explicitly, counsels application of the federal standard in this situation.

> Contrary to GATX' contention, we do not believe that the presence of Federal regulations on the subject precludes the imposition of tort liability according to State tort law standards more stringent than those contained in the Federal regulations. *We find no indication in the Federal regulations that the preemption of State tort law was intended.* In fact, it would be reasonable to conclude that the purpose of the regulations is to insure greater safety and that the imposition of tort liability on the basis of more stringent State tort law was intended.

Id. (emphasis added).

We believe that the differences between *Rucker* and the present case also counsel application of the federal safety standards as the standard of negligence in this case. In *Rucker*, there was no evidence of preemption and therefore the court did not use the federal regulations as the measure of duty. By implication, when there is evidence of federal preemption, the court would use the federal regulations as the measure of duty.[12] In the field of nuclear safety, there is not only evidence of preemption, but also uncontradicted statements by the Supreme Court that federal nuclear safety regulations preempt all state safety regulations. For instance, in *Pacific Gas & Electric Co. v. State Energy Conservation & Development Commission*, 461 U.S. 190, 208 (1983), the Court concluded that "the safety of nuclear technology was the exclusive business of the Federal Government." Similarly, in *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 240-41 (1984), the Court reiterated that "states are precluded from regulating the safety aspect of nuclear energy." In *Silkwood*, the Court

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[12] *Cf. Hunt v. Blasius*, 370 N.E.2d 617, 620 (Ill. App. 1977) ("If applicable governmental standards and specifications are mandatory requirements for sale of a product to that governmental entity and from which a manufacturer cannot deviate, is liability precluded in any respect in which the product complies? We answer in the affirmative."), *aff'd*, 384 N.E.2d 368 (Ill. 1978).

distinguished state standards for nuclear safety from state tort remedies:

> Congress' decision to prohibit the States from regulating the safety aspects of nuclear development was premised on its belief that the Commission was more qualified to determine what type of safety standards should be enacted in this complex area. As Congress was informed by the AEC, the 1959 legislation provided for continued *federal control over the more hazardous materials because "the technical safety considerations are of such complexity that it is not likely that any State would be prepared to deal with them during the foreseeable future."* H.R. Rep. No. 1125, 86th Cong., 1st Sess., 3 (1959). If there were nothing more, this concern over the States' inability to formulate effective standards and the foreclosure of the States from conditioning the operation of nuclear plants on compliance with state-imposed safety standards arguably would disallow resort to state-law remedies by those suffering injuries from radiation in a nuclear plant. There is, however, ample evidence that Congress had no intention of forbidding the States to provide such remedies.

Id. at 250-51 (emphasis added). Noting this difference, the Supreme Court allowed an award of punitive damages under state tort law.[13] Thus, we agree with the Third Circuit in *TMI* that it is clear from *Pacific Gas & Electric*

[13] *Silkwood*'s holding regarding damages was overruled by the Amendments Act which specifically bars punitive damages. *See* 42 U.S.C. § 2210(s) ("No court may award punitive damages in any action with respect to a nuclear incident or precautionary evacuation against a person on behalf of whom the United States is obligated to make payments under an agreement of indemnification covering such incident or evacuation."). Moreover, the Amendments Act makes pointedly clear that the "tension" between federal standards and state liability standards, *see Silkwood*, 464 U.S. at 857, is to be resolved so as to avoid inconsistency with the Price-Anderson Act. *See* 42 U.S.C. § 2014(hh).

and from *Silkwood* that state regulation of nuclear safety, through either legislation or negligence actions, is preempted by federal law. *See TMI*, 940 F.2d at 858 ("Two Supreme Court cases indicate that the duty the defendants owe the plaintiffs in tort is dictated by federal law."). When there is such overwhelming evidence of preemption with respect to safety matters, we believe *Rucker* requires use of the federal standard as the standard of care in state tort actions. Accordingly, we conclude that Illinois would use the federal safety regulations as the applicable standard of care in public liability actions.

2.

Even if Illinois would not apply the federal safety standards as the standard of care, however, we believe that the federal regulations must provide the sole measure of the defendants' duty in a public liability cause of action. Two reasons support this conclusion. First, the pre-Amendments Act preemption of state safety standards prevents application of a state standard of care at odds with federal safety standards. As we have already noted, the field of nuclear safety has been occupied by federal regulation; there is no room for state law. Consequently, "states are preempted from imposing a non-federal duty in tort, because any state duty would infringe upon pervasive federal safety regulations in the field of nuclear safety, and thus would conflict with federal law." *TMI*, 940 F.2d at 859.

In addition, as we noted at the outset of this discussion, the Amendments Act provides that state law shall be applied only as long as it is consistent with the Price Anderson Act. 42 U.S.C. § 2014(hh). As discussed in Part II.A.1 of this opinion, Congress has attempted for nearly fifty years to encourage private sector involvement in the nuclear industry and at the same time has sought to protect the public. The Price-Anderson Act was enacted to promote these goals of "protect[ing] the public and . . . encourag[ing] the development of the atomic energy industry." 42 U.S.C. § 2012. Accordingly, the Price-Anderson Act limits liability and provides for indemnification, but

does so against a stringent regulatory background. The federal nuclear safety regulations are part of this statutory scheme. Imposing a standard of care other than the federal regulations would disturb the carefully crafted balance between private involvement and safety that Congress has achieved. Thus, the application of something other than the federal safety regulations as a standard of care is inconsistent with the Price-Anderson scheme and consequently cannot be applied in a public liability action.

D. *Evidentiary Issues*

Lastly, Mr. O'Conner argues that the district court erred when it ruled Dr. Scheribel's testimony inadmissible. Mr. O'Conner asserts that Dr. Scheribel's testimony was held inadmissible only because he is a "lone voice." Mr. O'Conner believes that Dr. Scheribel's method of observation and diagnosis is sound and therefore that the jury should be allowed to hear and weigh the testimony itself.[14]

Our discussion of the admissibility of Dr. Scheribel's testimony is guided by *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 113 S. Ct. 2786 (1993). In *Daubert*, the Supreme Court rejected the test first enunciated in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), as the standard for admissibility of scientific evidence.[15] Instead, the Court

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[14] Mr. O'Conner also seems to argue that, because Dr. Scheribel is a treating physician, he is exempt from the requirements of Federal Rules of Evidence 702 and 703. However, we do not distinguish the treating physician from other experts when the treating physician is offering expert testimony regarding causation. *See Porter v. Whitehall Labs., Inc.*, Nos. 92-1962, 92-2231, 1993 WL 439148, at *6 (7th Cir. Nov. 1, 1993). Mr. O'Conner has not cited us any authority to the contrary.

[15] Prior to *Daubert*, the majority of federal courts applied the *Frye* standard to determine the admissibility of scientific evidence. The *Frye* test held "inadmissible expert testimony based on a scientific technique unless that technique is generally accepted as reliable in the relevant scientific community." *Porter*, 1993 WL 439148, at *5 n.3.

adopted a standard based on the Federal Rules of Evidence. The Court "began its analysis by focusing on the language of Rule 702. It found the rule clearly anticipated 'some degree of regulation of the subjects and theories about which an expert may testify.' " *Porter v. Whitehall Labs., Inc.*, Nos. 92-1962, 92-2231, 1993 WL 439148, at *5 (7th Cir. Nov. 1, 1993) (quoting *Daubert*, 113 S. Ct. at 2795).[16] The Court stated in *Daubert*:

> The adjective "scientific" implies a grounding in the methods and procedures of science. Similarly, the word "knowledge" connotes more than subjective belief or unsupported speculation. The term "applies to any body of known facts or to any body of ideas from such facts or accepted as truths on good grounds."

Daubert, 113 S. Ct. at 2795 (citations omitted). The Court continued:

> [I]n order to qualify as "scientific knowledge," an inference or assertion must be derived by the scientific method. Proposed testimony must be supported by appropriate validation—*i.e.*, "good grounds," based on what is known. In short, the requirement that an expert's testimony pertain to "scientific knowledge" establishes a standard of evidentiary reliability.

Id.

We have interpreted *Daubert* to require that the district court undertake a two-step inquiry. *Daubert* first "directs the district court to determine whether the expert's testimony pertains to scientific knowledge. This task requires that the district court consider whether the testimony has been subjected to the scientific method; it must rule out

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[16] Federal Rule of Evidence 702 provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

'subjective belief or unsupported speculation.' " *Porter*, 1993 WL 439148, at *5 (quoting *Daubert*, 113 S. Ct. at 2795). Second, the district court must "determine whether the evidence or testimony assists the trier of fact in understanding the evidence or in determining a fact in issue. That is, the suggested scientific testimony must 'fit' the issue to which the expert is testifying." *Id.* at *8.[17] We do not believe that Dr. Scheribel's testimony can meet at least the first requirement. Dr. Scheribel testified:

> I know what cataracts look like when they've been induced by radiation, by whatever dosage or time of exposure there was. Radiation cataracts are clinically describable and definable condition which, when present, cannot be mistaken for anything else.

Scheribel Dep. at 69. Essentially, Dr. Scheribel's method is to observe the cataracts and determine if they have characteristics specific to radiation-induced cataracts. Dr. Scheribel cites several sources that allegedly support this methodology. However, none of these sources indicates that radiation-induced cataracts can be identified by mere observation. Indeed, the articles referenced by Dr. Scheribel establish that Dr. Scheribel's methodology has no basis in scientific fact. These articles state that, although radiation-induced cataracts are of the posterior subcapsular type, all posterior subcapsular cataracts are not radiation-induced.[18] Furthermore, Dr. David J. Apple, author of one of the sources cited by Dr. Scheribel, affirmed that Dr. Scheribel's conclusion was incorrect: "Radiation induced cataracts are characteristically posterior subcapsular cataracts, but are not pathognomic [sic] as Dr. Scheribel represents." Apple Aff. at 2. Dr. Apple then describes the

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[17] *Daubert* and the Federal Rules require that scientific evidence meet both requirements before it is admissible.

[18] Although the specific pages of the articles that refute Dr. Scheribel's testimony are not included in the record, the plaintiff does not dispute the district court's conclusions regarding the contents of these articles.

methodology necessary to determine if cataracts are radiation-induced:

> The proper methodology, upon which any reasonable expert would rely, would include an examination of the medical literature on radiation-induced cataracts, an examination of the occupational dosimetry records which existed for the patient, a medical work-up to look for any of the normal biological changes which occur in individuals exposed to high levels of radiation, and a work-up of the patient's history to look for any other causes of the observed cataracts.

Id. However, Dr. Scheribel took none of these steps to determine the cause of Mr. O'Conner's cataracts. His method of diagnosis and his conclusion regarding causation therefore are not supported by the authors on which he claims to rely.

Beyond the recitation of authorities which clearly do not support his opinion, Dr. Scheribel has not come forward with any other support for his causation opinion. He has not produced any personal study or experiments that otherwise would justify his conclusions that Mr. O'Conner's cataracts are radiation-induced. Indeed, his familiarity with the effects of radiation generally is limited.[19] Dr. Scheribel's opinion has no scientific basis and, consequently, the district court

[19] During his deposition, Dr. Scheribel testified that he based his opinion on his prior experience with radiation-induced cataracts. However, Dr. Scheribel has treated only five patients with radiation-induced cataracts in his twenty years of practice. We do not believe that this limited exposure to radiation-induced cataracts qualifies as a basis for a scientifically sound opinion. *Accord Porter*, 1993 WL 439148, at *9 n.6 (stating that seeing disease five times during lengthy career not sufficient basis for scientific opinion under *Daubert*). Furthermore, Dr. Scheribel seemed to abandon this as a basis for his opinion in his affidavit which made no mention of personal experience.

correctly ruled that Dr. Scheribel's testimony is inadmissible.[20]

Because Dr. Scheribel provided the only evidence that Mr. O'Conner was subjected to radiation in excess of federal safety standards, Mr. O'Conner cannot prove causation. Accordingly, the district court was correct in granting summary judgment.

Conclusion

For the foregoing reasons, the judgment of the district court is affirmed.

AFFIRMED.

A true Copy:
Teste:

Clerk of the United States Court of Appeals for the Seventh Circuit

[20] Because we conclude that Dr. Scheribel's methodology is not well grounded in the scientific method, we have no occasion to consider whether there is the proper fit between the methodology used and the facts presented.

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APPENDIX B

JAMES R. O'CONNER,
Plaintiff
vs.
COMMONWEALTH EDISON COMPANY, a Corporation
and LONDON NUCLEAR SERVICES, INC.,
a Foreign Corporation,
Defendants

No. 88-1272

United States District Court,
C.D. Illinois.

July 23, 1992.

Jay H. Janssen, Peoria, IL for plaintiff.
Donald E. Jose, West Chester, PA, Richard Nelson, Chicago, IL Rex K. Linder, Peoria, IL for defendants.

FINDINGS OF FACT AND CONSLUCIONS OF LAW

MIHM, Chief Judge.

Before the court is a motion by defendants to exclude part of the testimony of plaintiff's causation expert, Dr. Karl Scheribel, and defendants' Motion for Summary Judgment based on the evidence then remaining in the case. This court grants both defendants' motions for the reasons state herein.

I. INTRODUCTION TO THIS CASE

The plaintiff, James R. O'Conner ("O'Conner"), worked at a nuclear power plant and then later developed a medical condition, including bilateral cataracts, that he claims was caused by the radiation exposure that he received at the plant. He consulted with many physicians in an effort to determine whether or not he had a medical claim. He has consulted with and seen the following doctors regarding his alleged "injuries" caused by radiation: Dr. Karl Scheribel (opthamologist); Dr. John Nelson (opthamologist); Dr. Clarence Ward (opthamologist); Dr. William Bond (opthamologist); Dr., Michael Rosenburg (opthamologist); Dr. Ennio Rossi (internal medicine); Dr. Greg Ichtertz (pulmonary medicine); Dr. James LeGrand (internal and pulmonary medicine); Dr. Bruce McLelland (dermatology); Dr. Mark Bullock (family medicine); Dr. Edward Silberstein (radiology); Dr. Robert Chapman (psychiatry); and Dr. Robert Sadoff (psychiatry). A description of his alleged "injuries" is more fully set forth below. He filed this lawsuit in Illinois State Court on October 1, 1985.

In passing the Price-Anderson Act, Congress recognized that a nuclear incident might be caused by any number of participants in the nuclear industry beyond the actual licensee. Congress did not want quick and fair compensation to be hampered by the complications likely to ensue if multiple defendants, each with its own law firm, were actively and separately defending. In "significant departure from normal tort law precepts," H.R.Rep. 104, 100th Cong., 1st Sess. pt.3, at 16 (1987), Congress, through mandatory indemnification provisions, channeled all public liability to licensees, and away from non-licensees, (such as contractors like London Nuclear), who might otherwise I have borne such liability under ordinary tort law. *See* 42 U.S.C. § § 2014(t), 2014(w), 2210(a). Congress noted that "regardless of whether a commercial power plant accident was caused by actions of the licensee, the plant manufacturer, or any other party, liability would by 'channeled' to the licensee and payment would be obtained from the compensation pool funded by utilities." H.R.Rep. 104, pt.3, at 16. The channeling provisions alter the ordinary congruence in tort law between causing and bearing liability. S.Rep No. 218, 100th Cong., 2d Sess. 4, *reprinted* in 1988 U.S.C.C.A.N. 1451, 1476, 1479 ("The Price-Anderson System including...the predetermined sources of funding, provides persons seeking compensation for injuries as a result of a nuclear incident with significant advantages over the procedures and standards for recovery that might otherwise be applicable under State tort law." Consequently, contractor London Nuclear Services cannot separately be liable to plaintiff in any manner in this case. One law firm has represented both defendants, with our conflict, throughout the pendency of this action, since there can only be one liability pursuant to Price-Anderson and that liability is channeled solely through the licensee and through the financial protection provided by Price-Anderson. Any disagreements between defendants as to who might have done what wrong are irrele-

vant to O'Conner's claim for compensation under Price-Anderson. The only relevant issues are whether the duty owed was breached (O'Conner's exposure), and whether that exposure caused his claimed injury (causation).

A. Procedural History

This case has a long procedural history that includes two published opinions on other issues in this case. The standard of care applicable to a radiation worker receiving an occupational radiation exposure was determined to be the federal permissible dose limits. *O'Conner v. Commonwealth Edison Company*, 748 F.Supp. 672 (C.D.Ill.1990). The Price-Anderson Amendments Act, upon which this court's jurisdiction rests, was found to be constitutional. *O'Conner v. Commonwealth Edison Company*, 770 F.Supp. 448 (C.D.Ill.1991). This present opinion will not revisit the issues in those two prior decisions but they are incorporated as part of the court's rationale for granting summary judgment.

Only those pleadings that are pertinent to the present opinion are set forth here. This case was filed in state court on October 1, 1985. Defendants removed the case to this court pursuant to the provisions of 28 U.S.C. § 1441 and the Price-Anderson Amendments Act of 1988, 42 U.S.C. § 2210(n)(2) on September 13, 1988. On May 25, 1989, defendants filed a Motion for summary Judgment on the grounds that there was no evidence that plaintiff had received a dose in excess of the Federal Permissible Dose Limits set forth at 10 C.F.R. § 20.101, and that there was no evidence that plaintiff's occupational radiation exposure caused any injuries to the plaintiff. Plaintiff filed his Response on July 25, 1989. Plaintiff included in his response, among other things, the deposition testimony of Dr. Karl Scheribel in which he states that *only* radiation could have caused plaintiff's cataracts, but did not include any affidavit from him that explained the basis of his causation opinion. At oral argument held on December 7,

1989, the court granted plaintiff's request to file supplemental affidavits and information regarding the bases of Dr. Scheribel's opinion. Plaintiff then filed a Notice of Compliance that included a short affidavit from Dr. Scheribel that simply listed the names of four articles that supposedly provided the scientific basis of his opinion. The articles referred to in this affidavit are discussed in detail *infra* at Section IV F.

On March 13, 1989, this court denied defendant's Motion for Summary Judgment on the grounds that a genuine issue of material fact existed as to whether plaintiff had received a dose in excess of the federal dose limits. That ruling was based upon what the court believed at the time was a reasonable interference from Dr. Scheribel's testimony that is O'Conner has radiation induced cataracts, he must have received a large dose of radiation in excess of the federal limits. On June 5, 1990, defendants filed a Motion in Limine to Exclude Dr. Scheribel From Testifying on Causation. Defendants also filed a Motion in Limine for a Determination of the Legal Duty Owed in which defendants requested that the court determine that the federal permissible dose limits set forth at 10 C.F.R. § 20.101 constituted the duty of care required of a utility operating a nuclear power plant and that a jury could not properly disregard these federal dose limits and substitute their own standards. The court granted defendants' Motion of September 26, 1990 for the reasons set forth in *O'Conner v. Commonwealth Edison Co.*, 748 F.Supp. 672 (C.D.Ill.1990) and also granted plaintiff's petition for interlocutory appeal which was then denied by the Seventh Circuit Court of Appeals. Misc. No. 90-8103 (7th Cir., Oct. 26, 1990). The court denied defendants' Motion to Exclude Dr. Scheribel on July 20, 1990.

However, on August 29, 1991, after reconsidering the issue of the admissibility of Dr. Scheribel's testimony sua sponte, the court entered an Order requesting "counsel to advise the court of the references in the record which bear on the admissibility of Dr. Scheribel's testimony."

Specifically, the court requested plaintiff to provide more information on "exactly how many patients Dr. Scheribel has had with [radiation induced] cataracts" and "The information which provides the basis for Dr. Scheribel's opinion." Order dated December 22, 1989.

Both parties filed briefs in response to said request. Plaintiff also filed a Motion for Direction and/or Clarification requesting the court to provide p[plaintiff with specific information about the court's concerns regarding Dr. Scheribel's testimony. At oral argument held on January 17, 1992, the court told plaintiff's counsel that it was concerned with the admissibility of Dr. Scheribel's testimony under Rules 702, 703, and *Frye v. United States*, 293 F. 1013(D.C.Cir.1923). Specifically, the court advised plaintiff that Dr. Scheribel seemed to have no verifiable scientific foundation for his opinion that only radiation could have caused plaintiff's cataracts. Tr. of Oral Argument, Jan. 17, 1992 at 10-11. The court further advised that Dr. Scheribel did not appear to be qualified to opine that he could diagnose radiation induced cataracts by simply looking at them, and that such an opinion is not accepted in the scientific community. *Id.* at 1314. Finally, the court specifically warned plaintiff that if he did not supplement the record to demonstrate that Dr. Scheribel was qualified and that there was a verifiable scientific basis for Dr. Scheribel's opinion, the court would exclude him from testifying and would grant defendant's Motion for Summary Judgment since the remaining record would be insufficient to go to a jury. Id. at 19. Both parties then filed briefs in response to the court's comments. Plaintiff has had sufficient time and sufficient opportunity to establish the verifiable basis of his expert's opinion, if there is any, or to substitute a new expert. Upon this extensive record the court now rules.

B. The Uncontested Fact of this Case

These uncontested facts are mostly taken from the

statement of uncontested facts that both parties agreed to in the Pretrial Order. Other facts in this case can be found in the court's two prior Opinions. *See O'Conner v. Commonwealth Edison Company,* 748 F.Supp. 672 (C.D.Ill.1990); *O'Conner v. Commonwealth Edison Company,* 770 F.Supp. 448 (C.D.Ill.1991).

In September and October of 1983, when he was 43 years old, O'Conner took a job as a pipefitter at Quad Cities. At the time the plant was shut down to change fuel. This is known as a refueling outage. After passing a pre-employment physical exam, O'Conner worked 14 days in the month of September, and 17 days in the month of October, 1983.[1] Although he was actually employed as a pipefitter by Morrison Construction Company, a subcontractor at the plant, O'Conner was subject to extensive control by Commonwealth Edison as required by the NRC since this particular pipefitting work needed to be performed in an area containing radioactive materials.

When radioactive material is in an area, that area is designated as a radiation controlled area and access to the area is limited to only those radiation workers who have been specially trained to work in such work area. A worker with such training is known as a radiation worker-to distinguish him from a regular worker at the plant who does not have this training and therefore cannot enter any radiation controlled areas.

O'Conner worked as a radiation worker doing pipefitting, not as a regular worker doing pipefitting. As such, he was required to complete a radiation training course before he could enter any radiation controlled areas. After he completed the course he still could not enter any radiation controlled areas without first reading and signing in under a Radiation Work Permit, known as an RWP, which listed the actual levels of radiation in the work area and specified how the worker must dress and what radiation measuring devices the worker must wear at all times

1. Specifically, Mr. O'Conner worked on the following dates: September 14, 15, 16, 17, 19, 20, 22, 23, 24, 26, 27, 28, 29, 30, and October 1, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 18, 19, and 20.

while he was in the radiation controlled area doing his work. O'Conner always obeyed these requirements. He never entered a radiation controlled area without the proper protection clothing or the proper radiation measuring instruments.

Radiation is measured in units just as distance is measured in units such as inches, yards or miles. The basic radiation units that are important in this case are known as "rem" and "millirem." One rem is equal to 1,000 millirem and conversely, one millirem is equal to one thousandth of a rem. To make these units of measurement more meaningful it is helpful to compare common doses all humans receive. The average American receives about 300 millirem per year from natural background radiation which is ubiquitous. *Caputo v. Boston Edison Co.*, 924 F.2d 11, 12 n. 1(1st Cir.1991); *Bubash v. Philadelphia Electric Co.*, F.Supp.297, 299 (M.D.Pa.1989).

> Although mankind has produced many sources of radiation, natural background remains the greatest contributor to the radiation exposure of the U.S. population today. Background radiation has three components: terrestrial radiation (external), resulting from the presence of naturally occurring radionuclides in the soil and earth; cosmic radiation (external), arising from outer space; and naturally occurring radionuclides (internal), deposited in the human body.

Johnston v. United States, 597 F.Supp. 374, 389 (D.C.Kan.1984)(quoting BEIR III at 37). In addition to natural background radiation, humans receive annual exposure from numerous medical sources and consumer products. For example, a routine chest x-ray gives a patient a dose of approximately 20 millirem. *Hennessy v. Commonwealth Edison Co.*, 764 F.Supp. 495, 499 (N.D.Ill.1991). Moreover, the average American will receive 6.5 rem (6,500 millirem) from medical and dental x-rays by the time he is 65. *Johnston v. United States*, 597 F.Supp. at 390. Construction materials and radium clocks

provide an annual dose of about 7-9 millirem, and television sets provide an annual dose of 1 millirem. *Id.; Allen v. United States*, 588 F.Supp. 247, 328 (D.Utah 1984), *rev'd on other grounds*, 816 F.2d 1417 (10th Cir.1987); cert. denied, 484 U.S. 1004, 108 S.Ct. 694, 98 L.Ed.2d 647 (1988).

The amount of radiation to which a radiation worker is exposed is known as his dose. The dose of a radiation worker is recorded by radiation detection devices that he wears while working.

One type of radiation device that all nuclear workers are required to wear is known as a film badge (or TLD). It is designed to record the worker's radiation exposure and save it for a two week period of time, after which the film badge is processed and the two week dose is recorded in the worker's radiation exposure records. A second type of radiation detection device is known as a self-reading pocket dosimeter (SRPD). This device can be read at any time by looking at it. Some SRPD's read out with digital numbers like a digital watch, while others read out with a gauge like a car's speedometer. O'Conner wore a film badge and two SRPD's when he worked at Quad Cities.

O'Conner's main complaint is that he felt warm while working on the night of October 3 and therefore felt something had happened to overexpose him. O'Conner's Dep. at 34. He alleges that he subsequently learned that London Nuclear was performing a dilute chemical decontamination on the same night and consequently that procedure must have caused him to receive "excessive" radiation exposure. Plaintiff never defined what "excessive" exposure was or offered any expert testimony that his dose exceeded the federal permissible dose limits applicable to radiation workers. *O'Conner v. Commonwealth Edison Co.*, 748 F.Supp. at 675. In fact, his radiation exposure during the night of October 3, 1983 was measured at a maximum of .045 rem (45 millirem) on one of his SRPD's (the other SRPD measured .038 rem (38 millirem). His exposure for all of September and October was recorded at

1.465 rem by his film badge. It is uncontested that these does, if accurate, simply are insufficient to cause cataracts because they fall far short of the threshold exposure necessary to cause cataracts. Since the minimum dose necessary to cause cataracts is 200 rem (Aff.of Dr. George R. Merriam Jr. at ¶ 14, Section I D *infra*), a dose of .045 rem would be about 4,444 times too small to cause a cataract.

Defendants maintain that unless plaintiff can offer any credible evidence that O'Conner received a dose of 200 rem or more at one time, he cannot pass the required threshold dose in order to provide the necessary factual support for any expert opinion that radiation caused his cataracts. Defendants further contend that unless the plaintiff can offer any credible evidence that O'Conner received a dose in excess of 12 rem in a year (or 3 rem in any quarter of the year) he cannot present the necessary factual basis for an expert opinion that the duty owed was violated. P(laintiff maintains that the testimony of Dr. Karl Scheribel meets both requirements.

C. Consensus Scientific Background for this Case

Radiation exposure and its effects upon humans is a very complex subject. Much background on this scientific subject can already be found in published case law. Johnston v. United States, 597 F.Supp. 374, 384-395 (D.Kan.1984); Allen v. United States, 588 F.Supp. 247, 260-329 (D.Utah 1984); Akins v. Sacramento Municipal Utility District, 6 Cal.App.4th 1605, 8 Cal.Rptr.2d 785 (3rd Dist.1992). This court will not repeat that published background material but will only add to it the following discussion of radiation induced cataracts.

Extensive discovery has established that there is a national and an international scientific consensus on the biological effects of ionizing radiation causing cataract formation in the lens of the eye. this scientific consensus is reflected in an extensive body of scientific literature and by numerous studies that have been performed by scien-

tists seeking to prevent the development of cataracts in patients undergoing x-ray therapy involving large amounts (thousands of rem) of radiation. The four leading scientists who have pioneered such research are Drs. David G. Cogan, George R. Merriam, Jr., Arthur E. Upton and George W. Casarett.[3] Each has been studying the biological effects of radiation for decades. Their work has provided the scientific and medical basis for national and international scientific organizations such as the United Nations Committee on the Effects of Atomic Radiation ("UNSCEAR"),[3] the International Council on Radiological Protection ("ICRP"),[4] the National Council on Radiation Protection and Measurements ("NCRP")[5] and the National

2. Aff. of Dr. Apple at ¶ 5. Dr. Apple is Professor and Chairman of the Department of Ophthalmology at the Medical University of South Carolina. He is also the author of the authoratiative textbook entitled Ocular Pathology (4th ed. 1991). this is the Dr. Apple upon whom plaintiff's expert claims to rely. A review of the other sources cited by Dr. Scheribel in his affidavit reveal that they also cite these pioneers in researching radiation induced cataracts as the leading experts in this field. Thus, even plaintiff's own expert must agree with this characterization.
3. The United Nations Committee on the Effects of Atomic Radiation (UNSCEAR) was established by the United Nations General Assembly in 1955. The committee is made of eminent experts in the field of radiation from the unternational scientific community. It periodically issues Reports that summarize the main conslusions of all the world's published scientific literature in the field. UNSCEAR, 1982, at 5. These reports of consensus science can be used to measure the validity of the claims of the litigants.
4. The International Commission on Radiological Protection was founded in 1928, and since 1950 has been providing general guidance on the widespread use of radiation sources. ICRP Publication 41: Nonstochastic Effects of Ionizating Radiation (1984). the ICRP is comprised of eminent international scientists who eveiw the world's literature on issues related to the health effects of radiation and periodically publish reports containing reliable consensus science statements in this field. These reports can be used by a court to evaluate an expert's claims.
5. The National Council of Radiation protection and Measurements ("NCRP") is a nonprofit corporation that was chartered by the United States Congress in 1964 to collect, analyze and disseminate information and recommdations on radiation protection wo cooperate in sharing information in the field. The Council is made up of experts who have detailed knowledge and competence in the particular area of the eighty-two scientific committees of the Council. NCRP Report Number 39: Basic Radiation Protection Criteria Report (1971). It publishes reliable consensus science reports in this field. These reports can be helpful to the court in assessing the various claims made by litigants and their experts.

Academy of Sciences Committee on the Biological Effects of Ionizing Radiation ("BEIR")[6] to develop the consensus knowledge and principles on radiation induced cataracts. Since the reports of these various scientific groups are prepared entirely outside the context of ongoing litigation, they provide an unusually objective statement of the known science in this field.

This scientific consensus concludes, among other things, that *radiation induced cataracts have a characteristic appearance but are not pathognomonic.* "Pathognomic" is the medical term for a specifically distinctive characteristic of a disease or pathologic condition on which a diagnosis can be made. (Dorland's Medical Dictionary (26th ed. 1985) at 977. See Aff. of Dr. Apple at ¶ 14;Aff. of Dr. Silberstein at ¶¶ 20-22; Aff. of Dr. Casarett at ¶¶ 10-11; Aff. of Dr. Cogan at ¶ 16; Aff. of Merriam at ¶¶ 25-26). This characteristic appearance is known as a posterior subcapsular cataract, because of its location in the back (posterior) part of the lens just below the capsule (subcapsular). Dorland's Medical Dictionary (26th ed. 1985) at 229. All radiation induced cataracts will be of the

6. The National Academy of Sciences was established by President Abraham Lincoln in1863 to provide the federal government with the advice of the best scientific minds in this country. It has a committee specifically dedicated to the health effects of ionizing radiation that issues periodic reports containing the most recent knowledge in this field. The most recent report is "Health Effects of Exposure to Low Levels of Ionizing Radiation: 1990 ("BEIR V"). This publication is commonly known as BEIR V because it is the fifth report of the Biological Effects of Ionizing Radiation (BEIR) Committee of the National Academy of Sciences. As Judge Kelly stated in *Johnston v. United States*, 597 F.Supp. 374 (D.Kan.1984) of the BEIR Committee and BEIR V's predecessor, BEIR III:
The Court has drown from the findings of a collection of studies known as the BEIR Committee for the purpose of definitions and indeed for much of what is ultimately concluded by the Court as reasonably probalbe...The Committee personnel read as a "who's Who from pertinent disciplines. the document, BEIR III..., is the result of a massive study. the court finds the findings of the study to be entirely persuasive and relevant in these cases. 597 F.Supp at 383-84. The BEIR Reports are reliable authorities containing the distilled advice of scientists who have reviewed all of the eminent scientific literature in this field. It provides a yardstick by which a court can measure the validity of the various expert opinions offered by litigants.

posterior subcapsular type *(characteristic)* but not all posterior subcapsular cataracts will be radiation induced (if it were otherwise they would be *pathognomonic*). Aff. of Dr. Cogan at ¶ 16. As we will see below, the failure to understand this distinction was one reason why Dr. Scheribel's opinion logically flawed.

Radiation effects can be divided into acute (or nonstochastic) effects and stochastic effects. Acute affects will only occur above a certain dose threshold because they are the result of accumulated physical damage to cells. Stochastic effects theoretically can occur at any dose level because they are thought to start with a single altered cell, but the risk of the effect is related to the dose received, i.e., less risk at lower dose and more risk at higher dose. health Effects of Exposure to Low Levels of Ionizing Radiation: 1990 ("BEIR V") at 396, 398. (This book is the latest edition of a report of the National Academy of Sciences concerning radiation health effects. It is eminently authoritative. *Johnston v. United States*, 597 F.Supp. 374, 383-84 (D.Kan.1984)). Cataracts are an example of an acute effect while cancer is an example of a stochastic effect. BEIR V at 398. The scientific consensus establishes that radiation induced cataracts are an acute effect with a certain threshold: it takes a certain amount of radiation to cause a cataract (the threshold amount), and exposures below that amount simply will not cause any cataract. Aff. of Dr. Upton at ¶¶ 6, 8; Aff. of Dr. Cogan at ¶ 11-12; Aff. of Dr. Merriam at ¶ 16.

D. The Threshold Amount of Radiation Required to Cause Cataracts

The threshold amount of radiation necessary to cause a cataract is about 200 rem received at once or about 600 rem spread out over time. During the 1930's and 1940's large amounts (thousands of rem) of radiation (x-rays) were beamed into patients heads in order to treat a variety of medical conditions. Aff. of Dr. David G. Cogan at ¶

7. The medical community noticed that cataracts sometimes resulted but did not know what dose level caused the cataracts and consequently how treatments could be changed to avoid the side effect of causing cataracts. Aff. of Dr. George Merriam at ¶¶ 6-7. Two ophthalmologists, one at the national Institute of Health (Dr. David Cogan) and one at Columbia Presbyterian Hospital (Dr. George Merriam) undertook very detailed scientific studies to find these answers so that unnecessary cataracts could be prevented.

Dr. David G. Cogan has studied radiation induced cataracts for 40 years. Aff. of Dr. Cogan at ¶ 4. He has published fourteen medical and scientific papers on the subject, the first one in 1949 that was a study of cataracts in the Japanese who survived the two atomic bombs that ended WWII. Aff. of Dr. Cogan at ¶¶ 5-6. Based upon his extensive study of humans and animal experiments, Dr. Cogan has concluded that radiation simply does not cause cataracts unless the dose is at least 600 rem (600,000 millirem) when that dose is delivered over a period of months. Aff. Dr. Cogan at ¶¶ 4-9. Dr. Cogan also discovered that the latency period between exposure and diagnosis is 13 years. Aff. of Dr. Cogan at ¶¶ 13-20. Dr. Cogan has examined the specific facts of this case and concluded that O'Conner's cataracts could not have been caused by his employment at Quad Cities because his dose was too small and because the latency period was too short. Aff. of Dr. Cogan at ¶¶ 21-23.

Dr. George R. Merriam, Jr. has studied radiation induced cataracts in humans and animals for 36 years. Aff. of Dr. Merriam at ¶ 8. He has published 19 medical and scientific papers on the subject. Aff. of Dr. Merriam at ¶ 9. Dr., Merriam's studies have shown that radiation does not cause cataracts unless the dose is 200 rem (200,000 millirem) delivered all at once or 400 rem (400,000 millirem) delivered over 3 weeks to 3 months or 550 (550,000 millirem) delivered over more than 3 months. This last number 550 rem, and the associated

time frame would be the same as D. Cogan's 600 rem delivered over a period of months. Aff. Dr. Merriam at ¶¶ 12-16. Dr. Merriam also found that the latency period between the exposure and the diagnosis of the cataract is extended with lower doses (200 to 400 rem) and with the radiation delivered over a longer period of time (many months). Aff. of Dr. Merriam at ¶ 13. For a dose of 250 rem (250,000 millirem) delivered all at once, it would be an average of 11 years and 8 months before a radiation induced cataract would appear, if one did happen to appear at all. Merriam and Focht, A Clinical Study of *Radiation Cataracts and the Relationship to Dose, the American Journal of Roentgenology, Radium Therapy and Nuclear Medicine*, at 299, Table V. He also found that a dose of 700 rem (700,000 millirem) was needed to produce even a 50 % chance of developing any cataract at all. Aff. of Dr. Merriam at ¶ 15. thus, cataracts would not appear at doses below 200 rem and even at 700 rem, the chances would be only 50-50 that a cataract may appear, and if so, it would only appear after many years had passed from the time of exposure. Dr. Merriam has examined the specific facts of the present case (i.e., a dose of .045 rem on October 3 or 1.465 rem for September, October 1983, and the 10 month latency period between exposure and first diagnosis) and concluded that radiation exposure at the Quad Cities simply could not have caused O'Conner's cataracts. Aff. of Dr. Merriam at ¶¶ 17-20.

Dr. Arthur C. Upton has been studying radiation induced injury to man and animals for 38 years and he has published four articles on radiation induced cataracts. Aff. of Dr. Upton at ¶ 3. Dr. Upton was a member of the United States Delegation to the 1977 United Nations Committee on The Effects of Atomic Radiation (UNSCEAR). Aff. of Dr. Upton at ¶ 4. The 1977 UNSCEAR Report focused on radiation carcinogenesis. The 1982 UNSCEAR Report focused on threshold effects, including cataracts. Aff. of Dr. Upton at ¶ 6. Distinguished UNSCEAR radiation scientists from all

over the world studied the world's scientific literature on the subject and condensed it into a report which reflects the world scientific consensus. Aff. of Dr. Upton at ¶ 5. As to radiation induced cataracts UNSCEAR concluded:

> One of the conclusions of the present report is that at low doses and dose rates [as would be experienced occupationally] the induction of non-neoplastic effects [such as cataracts] is not observed.

UNSCEAR, 1982, at 11.

* * * * *

> [T]he human lens responds to doses of ~ 2 Gy [200 rem] in a single treatment, or ~4 Gy [400 rem] when fractionated, resulting in the formation of cataract...The extent of cataract formation, as well as the incidence, is dose dependent. Higher doses yield more progressive cataracts with greater loss of vision. The latent period varies from 0.5 to 35 years; with an average of 2-3 years, although latency is also dose dependent...Recent reviews...suggest that a threshold for cataract for occupational exposure of lengthy fractionation is in the range of 6-14 Gy [600 to 1,400 rem].

UNSCEAR, 1982, at 598.

Dr. Upton also chaired The International Commission on Radiological Protection's (ICRP) task group which surveyed the world literature and wrote ICRP Publication 41: Nonstochastic Effects of Ionizing Radiation. Aff. of Dr. Upton at ¶¶ 7-8. This report was adopted by the ICRP in 1984. It concluded:

> At high doses, lens opacities (cataracts) develop within months, progress rapidly, and eventually cloud the lens completely, while at lower doses the opacities may take years to develop, remain microscopic in size, and cause no scientific impairment of vision.

ICRP No. 41, at 17.

> The threshold for x radiation for induction of minimally detectable lens opacities in the largest series

of radiotherapy patients studied to date for such lesions (233 patients) was estimated to vary, from about 2 Gy [200 rem] in a single exposure to as much as 5.5 Gy [550 rem] when the dose was fractionated over a period of 3-13 weeks.

ICRP No.41, at 18.

> The lowest dose observed to cause a progressive cataract [such as Mr. O'Conner has] among these patients, some of whom were followed up to 35 years after irradiation, was 5 Gy [500 rem]... From these observations, it may be inferred by extrapolation that a dose of more than 8 Gy [800 rem] of low-LET radiation [the type of radiation Mr. O'Conner received] would be required to produce a vision-impairing cataract under the highly protracted exposure conditions characteristics of occupational irradiation.

ICRP No. 41, at 18.

> According to these two highly respected national and international bodies of radiation protection scientists who have surveyed the world literature on the subject, if there is *any possibility* that O'Conner's dose on the night of October 3-4 were to cause a cataract that dose would have to be at least 200 rem. His daily dose was actually measured by two independent scientific devices at .045 rem and .038 rem, which is 4,444 times too low to cause a cataract. If there is *any possibility* that O'Conner's total occupational dose from September and November of 1983 were to cause a cataract, it would have to be at least 800 rem. However, his total dose was actually measured by scientific instruments to be a 1.465 rem, which is about 546 times too low to cause cataracts. yet, plaintiff's expert, Dr. Scheribel, proposes to testify that O'Conner has radiation induced cataracts, based solely upon his visual examination.

Dr. Lauriston S. Taylor is the founder of the ICRP and

the National Counsel on Radiation Protection and Measurements (NCRP). Aff. of Lauriston S. Taylor at ¶ 3. He co-chaired NCRP Report Number 39: Basic Radiation Protection Criteria which was published in 1971 after a review of the world scientific literature (Aff. of Lauriston S. Taylor at ¶ 5): NCRP No. 39 concluded:

> A long latent period exists between the time of the exposure and the onset of the development of cataracts. The interval varies inversely with dose, and five or more years may elapse between an exposure and the appearance of opacification. for very high doses, the interval may be reduced to months.Cataract formations in the human being has been considered to be a "threshold phenomenon," since exposures of the order of 600 R [rem] incurred in the course of therapeutic irradiations were required to produce opacification over the period of observations. Observation of survivors of the bombings at Hiroshima and Nagasaki have to date been consistent with the thesis that large doses of radiation are required to produce vision-impairing lens opacification.

NCRP Report No. 39, at 39.

Dr. George W. Casarett was Professor Emeritus and Former professor of Radiation Biology and Biophysics and Radiology at the University of Rochester School of Medicine. He chaired the committee that prepared NCRP Report No. 91: Recommendations on Limits for Exposure to Ionizing Radiation (1987). It concluded:

> The specific objectives of radiation protection are: (1) to prevent, to the extent practicable, the occurrence of severe radiation induced nonstochastic diseases [such as cataracts] by adhering to dose equivalent limits that are below the apparent practical threshold dose equivalent levels [so that no such effects will ever occur in the exposed population]...

NCRP No. 91, at 4.

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> For avoidance of nonstochastic effects [such as cataracts], the following annual dose equivalent limits are recommended for the occupational case: 150 mSv (15 rem) for the crystalline lens of the eye.

NCRP Report No. 91, at 26 (emphasis added).

The national scientific consensus, as reflected by the 1987 NCRP recommendations is that even if a radiation worker is allowed to receive a dose of 15 rem to his eye for each year during his occupational lifetime 9 which may be 40 years, he still will not be expected to develop a radiation induced cataract. Fifteen rem per year for forty years would equal a lifetime occupational dose to the eye of 600 rem, which would not be expected to cause a single cataract in workers so exposed.

Dr. Henry N. Wellman, Radiologist, served on the National Academy of Sciences Committee on the Biological Effects of Ionizing Radiation which wrote The effects on Population of Exposure to Low Levels of Ionizing Radiation: 1980 BEIR III. Aff. of Dr. Henry N. Wellman at ¶ 4. This committee of the United State's most knowledgeable scientists in this field also studied the world literature on radiation induced cataracts and concluded:

> The available data suggest a sigmoid dose-response relationship with an apparent threshold for lens opacification. Threshold doses in many for x-rays and gamma rays delivered a single exposure vary from 200 to 500 rads [rem], whereas the threshold for doses fractionated over periods of months is around 1,000 rads [rem].

The United States National Academy of Sciences (BEIR) agrees with the world scientific consensus as represented by UNSCEAR, ICRP, and NCRP reports that it takes a dose of at least 200 rem delivered all at once or a dose of approximately 1,000 rem delivered over many months to exceed the threshold for radiation induced cataracts. Even at those large doses, less than 50 percent

of the exposed individuals would develop cataracts. They are simply the minimum doses at which even one radiation induced cataract might appear in a group of exposed persons.

II. THE PRESENT EVIDENTIARY ISSUE

The issue that is the subject of this present Opinion is the admissibility of certain expert opinion testimony that plaintiff would offer at trial from a trial deposition transcript. Plaintiff's causation expert, Dr. Karl Scheribel, would state:

> I know what cataracts look like when they have been induced by radiation, by what ever dosage or time of exposure there was. Radiation cataracts are [a] clinically describable and definable condition which, when present, cannot be mistaken for anything else.

Dr. Scheribel's Evidence Deposition at 69.

From the court's review of all the scientific material on radiation induced cataracts, Dr. Scheribel appears to be the only doctor or scientist who will make such a statement, and it directly contradicts the consensus science that radiation induced cataracts are not pathognomonic. The real question than becomes should this "lone voice" be allowed to testify against the vast scientific consensus? Plaintiff maintains that the answer is "yes," and the jury, as the judge of the facts, would then determine which position has the most credibility.

Defendants maintain that this opinion is inadmissible under the Federal Rules of Evidence. Essentially, they argue that it constitutes what has become known as "junk" science. The essence of Dr. Scheribel's testimony in this case is that he claims that radiation induced cataracts can be positively identified by just looking at them. Dr. Scheribel's Evidence Deposition at 69. If that is medically and scientifically true, and since we know that it takes hundreds of rem to cause a radiation induced cataract, it

provided the basis for a reasonable inference that O'Conner must have been exposed to radiation above the federal standards in order to produce this cataract effect. Thus, Dr. Scheribel's proposed testimony is key to the plaintiff's case on duty owed as well as on causation. But defendants maintain that Dr. Scheribel's statement is medically and scientifically untrue. They point out that a valid logical conclusion cannot arise from a false premise no matter how correct the logic used to build upon the false premise.

Defendants assert this a case is a classic example of "junk" science, not only failing to assist the jury as expert opinion testimony should under rule 702, but actually misleading any juror, who would hear it. Consequently, defendants maintain that Dr. Scheribel's proposed statement should not be admitted into evidence. Relying upon cross-examination to expose the error is not sufficient, defendants claim, because that mechanism relies upon an unsophisticated lay person to arbitrate complex scientific issues which they may not even comprehend. Thus, the admissibility of Dr. Scheribel's testimony becomes the focal pint of the case. "The trial judge, of course, decides whether particular evidence is competent." Spaeth, Proposed Amendments to the Federal Rules on Admissibility of Scientific Evidence, A Judge's Perspective, 115 F.R.D. 112, 113 (1987).

III. RESOLUTION OF THE EVIDENTIARY ISSUE IN THIS CASE

A. Dr. Scheribel's Expertise and Opinion

Dr. Scheribel is a board certified ophthalmologist specializing in contact lenses. Dr. Scheribel's Evidence Dep. 12. In his curriculum vitae ("CV"), Dr. Scheribel describes his work as "teaching of the fitting of hard and soft contact lenses and the problems associated with the same, teaching of external disease and attending physician at three general ophthalmology clinics." Dr. Scheribel's CV, a copy

of which is attached as Exhibit A to his Evidence Deposition. He is not a radiation physicist and has not studied or performed any research in radiation physics or nuclear biology (Dr. Scheribel's Evidence Dep. at 66), or reviewed any of the relevant literature on radiation induced cataracts prior to testifying at his evidence deposition taken on June 10, 1988. Dr. Scheribel's Evidence Dep. at 63. He has not conducted any studies of the medical effects of radiation exposure on the eye (Dr. Scheribel's Evidence Dept. at 22), and has not written any books, articles, scientific papers or treatises on the effects of radiation on the eye. Dr. Scheribel's Evidence Dep. at 62. He has published only four scientific papers, and presented nearly a dozen invited lectures, eight of which were on contact lenses. Dr. Scheribel's CV. He admitted that he is not familiar with what would be considered an "excessive" amount of radiation, and was unable to explain what a "rad" was. Dr. Scheribel's Discovery Dep. at 28. Yet, it is through Dr. Scheribel that plaintiff expects to prove that his dose was too high. He could not state what medical effects a single rad to the eye would have. Dr. Scheribel's Discovery Dep. at 29. Further, Dr. Scheribel admitted that he was not familiar with the dose response curves of biological effects of radiation, was not familiar with what effect a 400 rem dose would have on the eye, and did not know what amount of radiation would be required to induce radiation cataracts. Dr. Scheribel's Evidence Dep. at 69. His total experience with radiation induced cataracts is observing only five patients who Dr. Scheribel believes had cataracts induced by radiation therapy for cancer. Dr. Scheribel's Discovery Dep. at 41-42. Since Dr. Scheribel's personal experiences is that only radiation therapy has produced cataracts, he essentially admits that dose is a very crucial element and must be independently verified before a diagnosis can be made. Otherwise, there is no logic to his thought process since many, if not all, of the other patients with cataracts would have had low dose exposures from common diagnostic x-rays. Since

Dr. Scheribel claims that he has seen about 4200 patients with cataracts (Aff. of Dr. Scheribel at ¶ 2) and only five were radiation induced, his opinion, as originally given (when he admitted that he had not reviewed any medical literature), rested on less than twelve hundredths of one percent of the cataracts he has seen.

Dr. Scheribel examined the plaintiff on May 13, 1985. Dr. Scheribel's Evidence Dep. at 13. O'Conner was also examined by him on the following dates: 11/4/86; 9/8/87; and 6/10/88. Plaintiff provided Dr. Scheribel with his "medical history" stating that he "had cataracts caused by a radiation exposure in October of 1983." Dr. Scheribel's Letter to Attorney Kenneth D. Peters dated June 27, 1985. O'Conner did not reveal to Dr. Scheribel that his father also had bilateral cataracts at approximately age 40. Dr. Scheribel's Discovery Dep. at 23. Dr. Scheribel looked into O'Conner's eyes with a microscope and diagnosed as having posterior subcapsular cataracts.

It is uncontested that O'Conner, like his father, has posterior subcapsular cataracts. Aff. of Dr. McGrath attached to Supplement to Defendants' Reply to Plaintiff's Motion in Limine to Exclude Evidence or Reference to Dr. Philip McGrath or Plaintiff's Father's Eye Condition; Dr. O'Brian's Dep. at 52-52. It is also uncontested that such cataracts can be caused by many factors including genetics and very large doses of radiation. However, Dr. Scheribel quickly leaped to the conclusion that plaintiff's cataracts could only have been caused by radiation exposure Dr. Scheribel's Evidence Dep. at 27-28, 53. Dr. Scheribel based this opinion on the history given by O'Conner and upon his own erroneous belief that radiation induced cataracts have a clinically unique appearance that "cannot be mistaken for anything else."

Thus, Dr. Scheribel's proposed testimony is not that radiation can cause cataracts or that plaintiff has the type of cataracts that can be caused by radiation. Both opinions are admissible and medically valid. His challenged

testimony is that only radiation exposure received at Quad Cities could have caused plaintiff's cataracts. Defendants maintain that such testimony is not admissible under Rules 702, 203 and the Frye test, supra p. 7, because it is medically erroneous.

B. Interference from Dr. Scheribel's Opinion on Duty Owed Issue

This court has ruled in a prior opinion that the standard of care in this case is compliance with the federal numerical dose limits. The readings on the radiation measuring instruments which O'Conner wore established such compliance unless there is some credible evidence that he must have received much more radiation. Plaintiff claims that since Dr. Scheribel will testify that O'Conner does have radiation induced cataracts, a jury is justified in ignoring the actual radiation measurements made at the time by the scientific instruments that he wore and substituting their belief that somehow he received hundreds or rem. Defendants maintain that Dr. Scheribel's testimony that only radiation exposure received at Quad Cities could have caused plaintiff's cataracts is inadmissible and medically invalid. With it plaintiff has no credible evidence upon which a reasonable jury could even infer that O'Conner received a dose above the standards. Although on the surface Dr. Scheribel's opinion at issue here seems to be a causation opinion, it is also a medical opinion which serves, if admissible, as the only basis upon which the plaintiff can argue an inference of breach of the duty owed. Consequently, the opinion that is challenged here as being inadmissible is essential to both plaintiff's duty owed and causation burden of proof.

C. The Federal Rules of Evidence

[1-3] A court may admit expert testimony if the subject of such testimony is beyond the knowledge of the average

layman and it "will assist the trier of fact to understand the evidence or to determine a fact in issue." Fed.R.Evid. 702; *Carroll v. Otis Elevator Co.*, 896 F.2d 210 (7th Cir 1990). An expert witness is not permitted to guess or base his opinion on surmise or conjecture. *Brown v. Chicago & North Western Transp.*, 162 Ill.App.3d 926, 936, 114 Ill.Dec. 165, 516 N.E.2d 320, 328 (1st Dist.1987); *In Re Agent Orange Prod. Liab. Litigation*, 611 F.Supp. 1223, 1244, 1248-49 (E.D.N.Y.1985), aff'd, 818 F.2d. 187 (2nd Cir.1987), *cert. denied, Lombardi v. Dow Chem. Co.*, 487 U.S. 1234, 108 S.Ct. 2898, 101 L.Ed.2d 932 (1988); *Johnston v. United States*, 597 F.Supp. 374 (D.Kan.1984). A court is not bound by the mere assertions of an expert, but it must "pay special attention to expert testimony," *United States v. Lundy*, 809 F.2d 392, 395 (7th Cir.1987), and must "look behind the expert's ultimate conclusion...and analyze the adequacy of its foundation." *Peterson v. Sealed Air Corp.*, 1991 WL 66370, 1991 Lexis 5333 (N.D.Ill.1991)(quoting *Richardson v. Richardson-Merrell Inc.*, 857 F.2d 823, 829 (D.C.Cir.1988)). Otherwise any case in which an expert was willing...to [testify] "to a reasonable degree of scientific certainty" and [say] "the basis of my opinion is X, on which experts in my field reasonably rely," every case requiring expert testimony would get to the jury. If a court is not permitted to examine the basis of an expert opinion in order to rule on the dmissibility of that opinion, then Rule 703 should read: "An expert may cite as the basis of his opinion anything he likes." *In re Paoli R.R. Yard PCB Litig.*, 706 F.Supp. 358, 368 (E.D.Pa. 1988), *rev'd on other grounds*, 916 F.2d 829 (3rd Cir.1990); *accord, Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823, 830 (D.C.Cir.1988) (whether expert's opinion has adequate basis is question of law for court), *cert. denied*, 493 U.S. 882, 110 S.Ct. 218, 107 L.Ed.2d 171 (1989). *See also Mid-State Fertilizer Co. v. Exchange Nat'l Bank*, 877 F.2d 1333, 1339 (7th Cir.1989). Such scrutiny is required because an expert's opinion "bears an aura of reliability and trustworthiness." It is axiomatic that judg-

ment is not precluded merely because a party has produced an expert to support its position. *Peterson v. Sealed Air Corp.*, 1991 WL 66370, 1991 Lexis 5333 (N.D.Ill.1991); *Mid-State Fertilizer Co.*, 877 F.2d at 1339. *United States v. Tranowski,* 659 F.2d 750, 757 (7th Cir.1981) (quoting *United States v. Brown*, 557 F.2d 541, 556 (6th Cir.1977)). The subject of radiation and its effect on humans is complicated and not easily understood. Therefore, it is necessary to qualify would-be experts who might otherwise obfuscate the issues and interfere with the outcome of this case. *See Akins v. Sacramento Municipal Utility District*, 6 Cal.App.4th 1605, 8 Cal.Rptr.2d 785 (3rd Dist.1992). As the SEventh Circuit has warned, "there is not much difficulty in finding a medical expert witness to testify to virtually any theory of medical causation short of the fantastic." *Stoleson v. United States*, 708 F.2d 1217, 1222 (7th Cir.1983). Judge Learned Hand observed that expert testimony creates the risk of a special type of prejedice:

> The trouble with all this is that it is setting the jury to decide, where doctors disagree. The whole object of the expert is to tell the jury, not the facts...but general truths derived from his specialized experience. But how can the jury judge between two statements each founded upon an experience confessedly foreign in kind to their own? It is just because they are incompetent for such a task that the expert is necessary at all.

Christophersen v. Allied-Signal Corp., 939 F.2d 1106, 1112 n. 10 (5th Cir.1991), *petition for cert. denied*, — U.S. —, 112 S.Ct. 1280, 117 L.Ed.2d 506 (1992), (quoting Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 Harv.L.Rev. 40, 53 (1901)).

[4] Federal Rules of Evidence 702 and 703 provide courts with the means to screen carefully the qualifications, and factual and scientific bases of an expert's opinion. *Lundy,* 809 F.2d at 395. A court has broad discretion to exclude an expert's opinion if it cannot withstand the

requirements of Rules 702 and 703. *Twin Disc, Inc. v. Big Bud Tractor*, 772 F.2d 1329 (7th Cir.1985) (court has broad discretion to assess admissibility of expert testimony); *Contractor Utility Sales Co. v. Certainteed Corp.*, 748 F.2d 1151, 1155 (7th Cir.1984) (same). The Federal Rules of Evidence allow a court to intercede and to limit expert testimony where a witness attempts to give an opinion on a subject for which he is not qualified, when there is no factual basis for that proffered opinion, when that opinion is based upon an error of logic, and when the expert cannot supply the court with any verifiable scientific support for the opinion. The Rules recognize that there is some limit to every expert's expertise and that he can not be allowed to go beyond it. For example, no medical doctor is automatically an expert in every medical issue merely because he or she has graduated from medical school or has achieved certification in a medical specialty. Indeed, a medical doctor who is quick to proclaim general and universally binding principles based on his or her own very limited knowledge or experience in the precise medical issue in question is more likely to mislead a jury than to help them find the truth. In science, a proposition is not true just because one claiming to be an "expert" is willing to make such a statement. In law, a statement is not admissible just because a self-proclaimed "expert" is willing to say it on the witness stand. Scientific truths must be verifiable or they are not scientific truths at all. An expert's opinion must also be verifiable or it is not expert at all. Rules of both science and evidence require a scientist or an expert to have a verifiable scientific basis for his opinion. Such controls are important in both fields to minimize error due to "junk" science.

D. Rule 702

[5-8] An expert witness must be qualified by specialized "knowledge, skill, experience, training or education." Fed.R.Evid.702; *Carroll v. Otis Elevator Co.*, 896 F.2d at

212. However, an "expert's opinion is helpful only to the extent that expert draws on some special skill, knowledge, or experience to formulate that opinion." *United States v. Benson*, 941 F.2d 598, 604 (7th Cir.1991).[7] District courts must ensure that expert opinion testimony is in fact *expert opinion*, "(that is, an opinion informed by the witness' expertise) rather than simply an opinion broached by a purported expert." *Id. See also Lundy*, 809 F.2d at 396 (7th Cir.1987). "Whether a witness is qualified as an expert can only be determined by comparing the area in which the witness has superior knowledge, skill, experience, or education with the subject matter of the witness' testimony." *Otis Elevator Co.*, 896 F.2d at 212; *Jurka v. Commonwealth Edison Co.*, No. 88 C 7852 Transcript of Proceedings at 5 (N.D.Ill., Aug. 9, 1990) (summary judgment appropriate because plaintiff had an "unqualified expert who relies upon an insupportable theory of causation"). a medical degree "alone does not qualify [an expert] to give an opinion on every conceivable medical question." *Christophersen*, 939 F.2d at 1113.[8]

O'Conner intends that Dr. Scheribel would give to the jury at trial an opinion in the unique, sophisticated and highly specialized field of radiation induced cataracts, and yet Dr. Scheribel does not qualify as an expert in this field through personal experience, specific education or even study of the relevant literature. In short, Dr. Scheribel's

7. Illinois state law is in accord. See Broussard v. Huffman Mfg. Co., 108 Ill.App.3d 356, 63 Ill.Dec. 854, 858, 438 N.E. 2d 1217, 1221 (1982)(expert's testimony must be on questions coming within his field of training or expertise); See e.g., People v. Huddleston, 176 Ill.App.3d 18, 125 Ill.Dec. 606, 615, 530 N.E.2d 1015, 1024 (1988)("the degree and manner of knowledge and experience that is required of the alleged expert is directly related to the complexity of the subject and the corresponding likelihood of erroe by one insufficiently familiar therewith").
8. Illinois state law is in agreement. See Harris v. Granite City, 52 Ill.App.3d 782, 8 Ill.Dec. 648, 651, 365 N.E.2d 1034, 1037 (1977) ("A witness is not qualified as an expert merely because he is employed in a certain capacity or engaged in a particular occupation. Mere observation...is not enough unless...he has some experience, or made some study of the type of problem involved."); Baty v. Baty, 83 Ill.App.3d 113, 38Ill.Dec. 516, 518, 403 N.E.2d 747, 749 (1980) (the test of competency of an expert is whether the expert discoses sufficient knowledge of the subject matter).

opinion that radiation cataracts are pathognomonic is not based on any special skill, knowledge, research or experience. He admitted in deposition that he never studied or performed research in radiation on the eye, that he did not know that the threshold dose required to induce cataracts and that he did not even have a rudimentary knowledge of the dose response curves for the effects of radiation. Dr. Scheribel's Evidence Dep. at 22, 62, 66, 69.

Based on the five patients he has observed with cataracts induced by radiation therapy, he developed his "binding universal rule" that he applied to O'Conner, thus committing the logical fallacy known as the Converse Accident (hasty generalization). The logical fallacy of Accident is the improper application of a general rule to a particular case. The logical fallacy of Converse Accident (hasty generalization) is the reverse. It occurs when a person erroneously creates a general rule from observing too few cases. Dr. Scheribel has illogically created a "binding universal rule" based upon insufficient data.

> For example, observing the value of opiates when administered by a physician to alleviate the pains of those who are seriously ill, one may be led to propose that narcotics be made available to everyone. Or considering that effect of alcohol only on those who indulge in it to excess, one may conclude that all liquor is harmful and urge that its sale and use should be forbidden by law. such reasoning is erroneous and illustrates the fallacy of converse accident or hasty generalization.

I. Copi, *Introduction to Logic*, at 68 (3rd ed.)

When pressed by this court for the bases of his opinion he abandoned any reliance on his person experience and relied only on medical articles (which he admitted he had not read before giving his opinion). See Aff. of Dr. Scheribel.

E. Ruling on Rule 702.

[9] As shown by the testimony of five of the world's leading experts in the field of radiation induced cataracts (see Affidavits of Dr. Merriam, Cogan, Upton, Wellman and Casarett), and the testimony of plaintiff's treating ophthalmologists (Cf. Dr. Bond's Dep. at 17; Dr. Nelson's Dep. at 16; Dr. Ward's Dep. at 34, 6, 10, 23), this field is highly specialized and is not a part of the routine practice of ordinary ophthalmologists. It requires a demonstrated expertise, if not by experience, at least by a study of all the published literature. Dr. Scheribel has no such experience and did not even take the time to examine the published literature before giving his bald opinion. Accordingly, Dr. Scheribel is not qualified to render an expert opinion that radiation cataracts are pathognomonic or that plaintiff's cataracts could only be caused by radiation exposure. His testimony on this one point can be excluded on that basis alone. Fed.R.Evid. 702. Dr. Scheribel is qualified to testify on matters of general ophthalmology, such as the fact that O'Conner has posterior subcapsular cataracts. But such testimony is not sufficient to survive a motion for summary judgment on the facts of this case.

F. Rule 703

[10,11] An additional independent evidentiary basis exists for excluding Dr. Scheribel' s opinion. An expert's opinion must have a sufficient verifiable scientific basis; the scientific data underlying his opinion must be of the type that is reasonably relied upon by experts in the field. Fed.R.Evid. 703; *United States v. Lundy*, 809 F.2d at 395; *United States v. Tranowski*, 659 F.2d at 755; *Viterbo v. Dow Chem. Co.*, 826 F.2d 420, 422 (5th Cir.1987) (where expert's opinion is not supported by scientific evidence his opinion "that it is so" is not admissible); *In Re Agent Orange*, 611 F.Supp. at 1244. "Courts are particularly wary of unfounded expert opinion when causation is the issue." *Id.* at 1249. This is especially true in cases such

as this where the plaintiff calimes that exposure to a toxic substance caused his injury. The court is concerned that the jury may blindly accept an expert's opinion that conforms with their underlying fears of toxic substances without carefully understanding or examining the basis for that opinion.

[12-14] Whether an expert's opinion has a sufficiently verifialbe scientific basis is an issue of law for the court to decide. *Richardson,* 857 F.2d at 833. Althouygh an expert opinion is indespensable to a case,

> that is not to say that the court's hands are inexorable tied, or that it must accept uncritically any sort of opinion espoused by an expert merely because his credintials render him qualified to testify.

Id. at 829. A Court has a duty "to examine the reliability of an expert's sources to determine whether they satisty the threshold established by [Rule 703]." *Christophersen,* 939 F.2d at 113 (quoting *Slaughter v. Southern Talc Co.*, 919 F.2d 304, 306-07 (5th Cir.1990)).

Such critical evaluation of the bases of an expert's opinion furthers the court's interest in providing relevant, accurate information to the jury to help it decide a fact in issue. Where the basis of an expert's opinion "is of such little weight" the jury should not be allowed to receive the opinion because such unsupported opinion "offers no expert assistance to the jury." *Viterbo,* 826 F.2d at 422; *United States v. Davis*, 772 F.2d at1339, 1344 (7th Cir.1985), *cert. denied*, 474 U.S. 1036, 106 S.Ct. 603, 88 L.Ed.2d 581 (1985). if the basis of the expert opinion is unsound, his conclucion id inaccurate, and the jury does not have sufficient evidence on which to decide the case. *See, e.g., Ealy v. Richardson-Merrell, Inc.*, 897 F.2d 1159, 1161-62 (1990); *Brock v. Merrel Dow Pharm. Inc.*, 874 F.2d 307, 309 (5th Cir.1989). Courts must reject opinions "founded on critical facts that are plainly untrustworthy, principally because such an opinion cannot be helpful to the jury." *Christophersen,* 939 F.2d at 1114.

In December 1989, this court entered an Order requesting plaintiff to supplement "the information that provides the basis for this opinion," that "radiation cataracts cannot be mistaken for anything else." *See* court Order dated December 22, 1989. In response , plaintiff submitted an affidavit by Dr. Scheribel which stated: "Regarding my opinion...I rely on scientific articles such as those attached to this affidavit." In his Affidavit, Dr. Scheribel did not claim to rely on his personal experience of seeing only five cases of radiation induced cataracts as support for his opinion. Thus, he abandoned the sole basis upon which he had made his opinion because in his deposition he admitted that he had not reviewed the medical literature prior to coming to his conclusion. Dr. Scheribel attached or listed the following articles and excerpts: (1) Diseases of the Lens and Vitreous; Glacoma and Hypotony by Duke-Elder, Vol. XI, (1969) pages 82-83; (2) Duane, Clinical Ophthalmology, page 8; (3) Apple, Diseases of the Lens (a medline search failed to reveal any such book or article and defendants repeated requests for a copy of the article from the plaintiff have remained unanswered);[9] and (4) an excerpt of a section entitled "X-Ray and Radium Cataracts" from an unknown book by an unknown author. See Aff. of Dr. Scheribel at ¶ 3.

"The mere recitation of a list of studies is not a magical incantation paving the way to the witness stand unless it is accompanied by reasoned and scientifically accepted analysis." *Eggar v. Burlington Northern Railroad Co.*, 1991 WL 315487, 6 (D.Mont., Dec. 18, 1991) (quoting *Carroll v. Litton Systems Inc.* No. B-C-88-253, 1990 WL 312969, 1990 U.S.Dist. Lexis 16833 (W.D.N.C., Oct. 29, 1990) (magistrates opinion adopted by district court by Order dated July 15, 1991)).

The court has examined these references and the associated affidavits and briefs and concludes that not one of these articles or excerpts supports D. Scheribel's opinion

9. A copy of the most recent request is a letter dated January 31, 1992 from Mr. Jose to Ms. Maher

that a radiation induced cataract "cannot be mistaken for anything else." To the contrary, the three articles (that were attached) all stated what consensus science has discovered through years of research: posterior subcapsular cataracts have a characteristic appearance in that radiation induced cataracts are of the posterior subcapsular type, but not all posterior subcapsular cataracts are radiation induced. Duke-Elder, System of Ophthalmology, (1972) Vol. XIV, Ch. X at 994-95; Aff. of Dr. Apple at ¶ 14; Aff. of Dr. Silberstein at ¶ 22; Aff. of Dr. Apple at ¶¶ 14, 19. Dr. Scheribel's first reference to a dated 1969 edition of the Duke-Elder Series cited the wrong pages and totally missed the relevant sections pertaining to radiation induced cataracts in humans. He cited from a section in Chapter Three titled Experimental Cataract that concerns experimentally producing cataracts in animals, not in humans at all. This error is particularly egregious since the very section Dr. Scheribel cited explicitly instructs the reader to turn to the section that is directly relevant to radiation cataracts:

> A radiational cataract...These will be discussed in the volume of Injuries where full details with the appropriate bibliographies will be found.

Duke-Elder, System of Ophthalmology, (1969 ed.), Vol. XI, Chapter III, at 81. It would appear that Dr. Scheribel never even read the pages that he cited to the court or he would have seen his error.

An examination of that relevant section directly contradicts Dr. Scheribel's opinion: "The clinical picture of a radiational cataract from whatever source it is derived is *characteristic* [not pathognomonic]." Duke-Elder, System of Ophthalmology, (1972 ed.), Vol. XIV, Chapter X, at 994-95 (emphasis added). The court notes that Duke-Elder cities to and relies upon the very studies performed by defendant's experts, Drs. Merriam and Cogan. This court finds that Dr. Scheribel misinterpreted and cited the wrong sections of the very reference upon which he himself relies. Thus, Duke-Elder does not provide a basis for Dr.

Scheribel's opinion, but rather directly supports the defendants' position.

Dr. Scheribel's second reference is to Duane. The pertinent sentence from the single page attached to Dr. Scheribel's Affidavit simply says that "Other methods used to produce cataracts are radiation...Radiation cataracts appear to be confined locally to the region of the lens receiving irradiation while the shielded region is less damaged." This statement does not support Dr. Scheribel's opinion that a radiation induced cataract is so unique in appearance that it can be clinically identified as being caused by radiation and nothing else. To the contrary, Duane only says that a radiation induced cataract is of the posterior subcapsular type which is "a very common variety." Duane, Clinical Ophthalmology, Vol. I, Chapter 72 at 16. Again, the court finds that Duane contradicts Dr. Scheribel's opinion and directly supports the affidavits of all the defense experts. Dr. Scheribel's third reference is the *Diseases of the Lens* by Apple.

Since this issue was briefed in January 1991, the "Apple" reference Dr. Scheribel was attempting to cite, and claimed to rely upon, has been located by defendants. Dr. David Apple has published, along with Dr. Rabb, a book entitled Ocular Pathology. Aff. of Dr. Apple at ¶¶ 7-9. This must be the book which Dr. Scheribel miscited as "Diseases of the Lens, Apple's by Apple." since Dr. Scheribel's affidavit is dated January 12, 1990, he must have been referring to the 3rd edition which was published in 1985 and was the most current edition available in 1990. However, he must not have actually reviewed the book since Dr. Apple states that posterior subcapsular cataracts can be caused by many conditions and that their appearance is "identical" regardless of the cause:

> One of the most common pathologic reactions of the lens epithelium is an abnormal overgrowth, or proliferation of the equilateral cells, creating a posterior migration of the lens epithelium...this reaction occurs in most idiopathic "senile" posterior subcap-

sular (cupuliform) cataracts...

> *Posterior migration and bladder cell formation signify a histopathologic lesion, not a specific disease.* Therefore, such diverse conditions as senile cataract, secondary traumatic cataract, and congenital cataract associated with hyaloid vascular remnants can create an identical tissue reaction.

Apple, *supra* at 127 (emphasis is original). Thus, a radiation induced cataract is just one type of secondary traumatic cataract. Dr. Apple concluded that radiation induced cataracts are not pathognomonic and he even used italics to warn the reader that posterior subcapsular cataracts are caused by "diverse conditions" and "*are not a specific disease.*" Aff. of Dr. Apple at ¶ 10. Dr. Apple himself even filed an affidavit with this court stating that Dr. Scheribel's opinion is wrong and certainly is not supported by Dr. Apple's book.

In 1991 Dr. Apple published the fourth edition of Ocular Pathology. It contains the same language on this point as the third edition except that the italics are no longer used. Apparently, Dr. Apple felt that the point was so obvious that it no longer needed the additional emphasis.

Dr. Scheribel's fourth reference is to an attached article by an unknown author extracted from an unidentified source. Dr. Scheribel failed to provide the name of the book or pamphlet from which he copied the attachment and failed to provide a full and proper reference so that the court and defense counsel could examine the entire material in context. Even without full citation, a review of that reference shows that it too directly contradicts Dr. Scheribel's opinion and merely informs the reader that a radiation cataract is of the posterior subcapsular type. It states that: "Exposure of the eye to x-ray and radium can produce typical lens changes." (page 79). In other words, such a radiation induced cataract "can" have the appearance of a "typical" posterior subcapsular cataract such as those occurring naturally or produced by many other causes. If a radiation induced cataract has such a "typical"

appearance, that hardly means that no other cataract ever has that same typical appearance. Certainly all radiation induced cataracts are of the posterior subcapsular type but one cannot make that statement backwards. It is not true that all posterior subcapsular cataracts are radiation induced, as Dr. Scheribel's proffered opinion maintains. While it is true that all men are human, it is not true that all humans are men. Dr. Scheribel's error in logic is just as elementary. In sum, each of his cited references fail to support his blanket assertion that a radiation cataract "cannot be mistaken for anything else." The court finds Dr. Scheribel's opinion without support in the very articles upon which he claims to rely and that he cites to the court as the basis for his opinion, as requested by this court.

Drs. Cogan, Merriam, Casarett, Silberstein and Apple each reviewed Dr. Scheribel's opinion that radiation induced cataracts are pathognomonic and each concluded that Dr. Scheribel's opinion was not supported by the medical and scientific experts in the field of radiation induced cataracts. These experts have testified as follows:

> 11. Dr. Scheribel's assertation that posterior subcapsular cataracts can be identified as definitely being due to a radiation exposure if they have a clear area "fore and aft" of the cataract is wrong as a matter a medical science.

Aff. of Dr. Casarett at ¶ 11.

> 16. Although a radiation-induced cataract is of the posterior subcapsular type and usually develops a doughnut shape in its early states, not all cataracts with those characteristics are radiation-induced. It is simply not possible to look at the appearance of a cataract and determine that it could only have been caused by radiation exposure.
>
> *****
>
> 20. I do not believe that the opinion which Dr. Scheribel expressed in [his evidence] deposition represents the

consensus scientific and medical view of experts in radiation-induced cataracts because it does not adequately account for the factors of dose threshold, latency period and nonspecificity of morphology as identified previously in this affidavit.

Aff. of Dr. Cogan at ¶¶ 16, 20.

25. Dr. Scheribel's blanket assertion that any cataract with a clear area "fore and aft" must necessarily be radiation induced is wrong as a matter of medical science.

26. Radiation-induced cataracts often have a characteristic doughnut shape which has not been reported by Dr. Scheribel but even that morphologic state is not conclusive proof that a cataract is radiation-induced. Medical science simply cannot tell from looking at a cataract whether or not it was caused by a prior radiation exposure.

Aff. of Dr. Merriam at ¶¶ 23-26.

Dr. Edward B. Silberstein is Professor of Radiology and medicine at the University of Cincinnati Medical Center, and he performed an extensive medical evaluation of O'Conner on January 7, 1985. Dr. Silberstein also reviewed Dr. Scheribel's opinion. Dr. Silberstein concluded:

> There is no basis in medicine for Dr. Scheribel's statement that he can tell a radiation induced cataract from any other cataract because of its unique appearance.

Aff. of Dr. Silberstein at ¶ 22. Dr. Apple concluded:

13. Dr. Scheribel is wrong as a matter of medical science to claim that he, or anyone else, can tell that a certain posterior subcapsular cataract was caused by radiation just by looking at it.

15. No reasonable expert in ophthalmology would attempt to diagnose a radiation induced cataract simply by looking into a patient's eye and listening to his story about being exposed to an excessive amount of radiation.

Aff. of Dr. Apple at ¶¶ 13, 15.

This court agrees. The court finds that the "opinion" Dr. Scheribel intends to give to the jury is not only without verifiable scientific support, it is actually directly contradicted by his own claimed sources and by consensus medical science. Such a scientifically erroneous "opinion" cannot help the jury discover the truth here. It could only serve to mislead them.

[15] A second independent Rule 703 basis exists for excluding Dr. Scheribel's opinion. When confronted with difficult medical questions, "courts must critically evaluate the reasoning process by which the experts connect data to their conclusions in order for courts to consistently and rationally resolve the disputed before them." Brock v. Merrell Dow Pharm. Inc., 874 F.2d 307, 310 (5th Cir.1989), cert. denied, 494 U.S. 1046, 110 S.Ct. 1511, 108 L.Ed.2d 646 (1990). As the court observed in Peterson v. Sealed Air Corp., 1991 WL 66370, 1991 Lexis 5333 (N.D.Ill., April 22, 1991):

> In order to create a genuine issue of material fact, an expert's testimony must include a process of reasoning based on a firm foundation. "An expert who supplies nothing but a bottom line supplies nothing of value to the judicial process."

Id., (quoting *Mid-State Fertilizer Co.*, 877 F.2d at 1339). A court that is untrained in science may not feel well suited to determine whether an expert's opinion has valid and verifiable scientific reasoning process. But the Federal Rules of Evidence provide a helpful yardstick with which to measure and judge expert opinion testimony: would a reasonable expert in the field rely on the data and reasoning used? *Tranowski,* 659 F.2d at 755; *Lundy,* 809 F.2d at 395.

Here Dr. Scheribel originally based his opinion on only five other patients who he claims had radiation induced cataracts and on his unfounded belief that radiation induced cataracts are pathognomonic. Such a basis is scientifically insufficient to generate any 'binding universal

rule' and would not be relied on by a reasonable expert in the field of radiation induced cataracts for three reasons. Aff. of Dr. Silberstein at ¶ 18, Aff. of Dr. Apple at ¶ 15; Aff. of Dr. Merriam at ¶ 23.

Dr. Scheribel's limited experience with only five other patients with radiation induced cataracts cannot serve as a valid scientific basis from which to derive his 'binding universal rules." *See* Aff. of Dr. Silberstein at ¶¶ 16-18; Aff. of Dr. Apple at ¶¶ 14-18. From such meager experience he created a broad, general and inflexible universal rule that *only* radiation could have caused O'Conner cataracts. As stated earlier, Dr. Scheribel committed the logical fallacy known as Converse Accident (hasty generalization). In *Nemmers v. United States*, 681 F.Supp. 567 (C.D.Ill.1988), aff'd, 870 F.2d 426 (7th Cir.1989), plaintiff's sued for injuries arising from the birth of their son, and defendant sought to introduce the expert testimony of an actuary on future economic trends. Id. at 577. Although the expert had training and experience as actuary, thereby qualifying as an expert in the field, she had no education, training or experience in the particular subject on which she was to offer her opinion, e.g., long-term future economic trends. *Id.* at 580. This court determined that the expert did not have a sufficient basis to render such an opinion. The court reasoned:

> While personal experience may well act as a basis for a witness qualified as an expert...personal experience alone is simply not enough, the court's opinion, where the experience does not include some theoretical foundation.

Id. at 580. This court noted that the actuary had not conducted research or consulted any authorities on the subject of her proffered opinion and had no knowledge of rudimentary and essential concepts necessary for a reliable opinion. *Id.*

Here, Dr. Scheribel is trained in a particular field and has experience in that field (general ophthalmology). but his severely limited personal experience of seeing only five

patients with radiation induced posterior or subcapsular cataracts does not provide a sufficient foundation for a scientific reasoning process that concludes that *every* posterior subcapsular cataract *must be* caused by radiation *and nothing else*. He has "neither conducted any research, nor consulted any authorities" and admitted that he does not have even rudimentary knowledge of radiation induced diseases. Dr. Scheribel's Evidence Dep. at 22, 62, 66, 69; Dr. Scheribel's Discovery Dep. at 28-29, 41-42. His limited personal experience simply cannot provide a sufficient scientific basis upon which any scientific reasoning process can discover a 'binding universal rule."

Second, Dr. Scheribel failed to assess properly O'Conner's radiation dose before concluding that the radiation caused his cataracts. Aff. of Dr. Apple ¶¶ 15-17; Aff. of Dr. Silberstein at ¶ 12. As set forth previously, any expert with even rudimentary knowledge of this field would know that radiation induced cataracts require a certain threshold dose and would carefully seek to discover that exact dose involved *before* giving a causation opinion. Dr. Scheribel did the opposite: he presumed that the cataracts were radiation induced, and then presumed that the plaintiff must have somehow been exposed to a high enough dose to exceed the threshold in order to have caused the cataracts, thereby justifying his initial diagnosis. In *Christophersen,* the trial court excluded the opinion of an expert who testified that plaintiff's occupational exposure to nickel and cadmium fumes caused his fatal cancer. In affirming the court's decision to exclude the expert, the United State Court of Appeals, Fifth Circuit (en banc) determined that an accurate assessment of plaintiff's dose was critical to giving a reliable opinion on causation. The court stated that the facts and data relied on by the expert in assessing the dose received by the plaintiff were not the type reasonably relied on by experts in the field and therefore, "accurate dosage and exposure information was not used."
Id. at 1113. The court explained:

> If the dosage of the harmful substance and the duration of exposure to it are the types of information upon which experts reasonably rely when forming opinions on the subject, then the district court was justified in excluding Dr. Miller's opinion that is based upon critically incomplete or grossly inaccurate dosage or duration data.

939 F.2d at 1114.

An expert in radiation induced cataracts would require knowledge of a patient's radiation dose *before* finding causation. He would not rely only on the story told by the patient to determine the patient's radiation dose. Rather, the expert would review the patient's actual dosimetry records, and examine (or perform) the appropriate medical tests to determine the dose received. Aff. of Dr. Apple at ¶ 16; Aff. of Dr. Silberstein at ¶ 12. He would also review the scientific literature to learn the threshold dose of radiation and minimum latency period required to cause cataracts. As. Dr. Silberstein explained:

> 12. the proper medical methodology used by any reasonable expert in the field to assess a claimed dose of 400 rem includes: Obtaining an accurate history from the patient, obtaining copies of the dosimetry records for the individual, performing a whole body count to check for internal deposition of radionuclides, obtaining the patient's medical records from the weeks after the claimed incident so that the blood counts can be checked for a reduced lymphocyte chromosome aberrations, examining his medical records for evidence of the acute radiation syndrome which would occur within a day of a dose of 400 rem, and examining his work records to see if he was able to work in the days following the alleged exposure.

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15. By the time that Dr. Scheribel gave his Opinion in

this case at his Evidence Deposition on June 10, 1988, all this work performed by our laboratory in assessing Mr. O'Conner's dose had been in existence for about four years yet he failed to ask for, obtain or use any of this essential data in performing his analysis.

16. I have reviewed a copy of Dr. Scheribel's Evidence Deposition and a copy of his Affidavit dated January 12, 1990.

17. The methodology which Dr. Scheribel used to come to his opinion of causation in this case is to first uncritically accept what Mr. O'Conner told him about receiving a high dose and then assume that radiation induced cataracts are pathognomonic.

18. Both parts of Dr. Scheribel's methodology are errors and are not methodology are errors and are not a methodology which any reasonable expert in radiation doses or radiation effect on humans would use.

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26. What Dr. Scheribel did in this case is not a differential diagnosis. By its very name differential diagnosis requires the physician to acquire all of the evidence, to consider all of the evidence acquired, to consider all of the possible diseases, and then to use this data to make the best diagnosis on the facts of an individual case. Dr. Scheribel did no such thing in this case. He failed to follow the methodology, as described above, which any reasonable expert in this field of medicine would follow, before attempting to make a differential diagnosis as to whether a certain cataract was radiation induced.

Aff. Dr. Silberstein at ¶¶ 12, 15, 16-18, 26. *See also*, Aff. of Dr. Merriam at ¶¶ 23-24 where he states:

> 23. ... Dr. Scheribel did not follow the method of analysis which would be reasonably relied upon by an expert in radiation-induced cataracts.
>
> 24. ... Dr. Scheribel failed to require some objective evidence of dose, he failed to research the threshold

dose for cataractogenesis, he failed to account for the long latency period necessary for a dose of even 200 rem, and he failed to realize that posterior subcapsular cataracts are rather common in men aged 40 through 49.

Commonwealth Edison maintained extensive dosimetry records, which were available for examination. Blood samples were taken within four weeks of the alleged exposure. If the plaintiff's dose had been over 100 rem, his absolute lymphocyte count would have been less than 1000. O'Conner's actual lymphocyte count was 2,105, well within normal limits "indicating that his radiation exposure is not what he claims." letter by Dr. Edward B. Silberstein dated April 2, 1985, a copy of which is attached as Exhibit 2 to Dr. Silberstein's Affidavit. A second test to determine O'Conner's dose was performed at Oak Ridge National Laboratory. This test analyzed his chromosomes and ruled out a dose of more than 25 rads, which is the lower limit of sensitivity of this test. *See* Chromosome Analysis of Blood Sample by Dr. R. Julian Preston *and* Aff. of Dr. Silberstein at ¶ 23. The proper methodology for determining whether O'Conner received radiation exposure sufficient to cause cataracts is set forth in Dr. Silberstein's Affidavit at ¶ 12 and Dr. Apple's Affidavit at ¶ 16.

The court finds that Dr. Scheribel's opinion is based on critically incomplete and grossly inaccurate dose data. Dr. Scheribel never attempted to assess O'Conner's dose and admitted that he did not know O'Conner dose when he gave his opinion. Dr. Scheribel's Evidence Dep. at 63. Instead, he relied on O'Conner himself,, who told Dr. Scheribel "that he had cataracts caused by radiation exposure in October of 1983." Dr. Scheribel's letter to attorney Kenneth D. Peters dated June 27, 1985; Dr. Scheribel's Evidence Dep. at 23. Each of O'Conner's actual test results were in existence and available to Dr. Scheribel when he examined O'Conner in May, 1985. Aff. of Dr. Silberstein at ¶ 14. However, he did not examine the dosimetry records, did not review the bold test results, did

not review the chromosome analysis, and did not review the relevant scientific literature. Dr. Scheribel's Evidence Dep. at 69.

Third, an expert would not reasonably rely on the mere presence of posterior subcapsular cataracts to opine that such cataracts were radiation induced. Aff. of Dr. Silberstein at ¶ 17; Aff. of Dr. Apple at ¶¶ 14, 15. The reliable expert would know (or at a minimum discover), based on even a cursory review of the appropriate medical literature, that radiation induced cataracts have a characteristic appearance, but that not all cataracts with such characteristic appearance and caused by radiation, there being numerous other causes. Aff. of Dr. Apple at ¶ 14. An expert would attempt to rule our each other possible cause of posterior subcapsular cataracts. By making such inquiries the expert would learn the true dose received, realize that the dose was insufficient to cause cataracts, and investigate other more likely causes for O'Conner's cataracts. Aff. of Dr. Silberstein at ¶ 26.

[16] Just as a medical opinion without a verifiable scientific basis is inadmissible, and expert opinion that *actually contradicts directly* with scientific consensus is inadmissible . See *Ealy v. Richardson-Merrell, Inc.*, 897 F.2d 1159, 1162 (D.C.Cir.1990) ("[A]n opinion refuting...scientific consensus is inadmissible for lack of an adequate foundation"); *accord, In Re Agent Orange*, 611 F.Supp. at 1242. *See also, Lynch v, Merrell-National Laboratories*, 830 F.2d 1190 (1st Cir.1987).

[17] Without citing any case authority, plaintiff attempts to avoid the stringent requirements of Rule 703 by claiming that there is a distinction between a treating physician and a "'nontreating expert hired for litigational purposes." Plaintiff concludes that "the testimony of a treating physician...should not be evaluated in light of Rule 703." However, even under Illinois state law, that assertion is clearly wrong. In adopting Federal Rule of Evidence 703, the Illinois Supreme Court stated:

> [W]e believe that Federal Rule Evidence

703...makes no distinction between the opinions of treating and non-treating doctors...the key element in applying Federal Rule 703 is whether the information upon which the expert bases his opinion is of a type that is reliable.

Wilson v. Clark, 84 Ill.2d 186, 49 Ill.Dec. 308, 312, 417 N.E.2d 1322, 1326 (1986). At oral argument plaintiff asserted that a treating physician who testifies as an expert must be treated differently than a "Rule 220 expert under Illinois Civil Practice," in that they do not fall under Rule 702 and 703. Tr. of Oral Argument, Jan. 17, 1992 at 4-5. This court asked for case authority on that point. Tr. at 25. Plaintiff's brief failed to provide any such authority. Perhaps plaintiff was confused by Illinois Supreme Court Rule 220 governing disclosure of the identity of an expert hired to testify at trial, in contrast to disclosure of treating physicians.

G. Ruling on 703

[18] Having exercised its duty mandated by Rule 703 to examine the basis of expert opinion testimony and the reasoning process used, the court finds that Dr. Scheribel's opinion has no verifiable scientific basis and no verifiable scientific reasoning process.

The court further finds that Dr. Scheribel's opinion directly contradicts consensus science. Aff. of Dr., Apple at ¶ 13. ("Dr. Scheribel is wrong as a matter of medical science to claim that he, or anyone else, can tell that a certain posterior sibcapsular cataract was caused by radiation just by looking at it."); Aff. of Dr. Silberstein at ¶ 18. ("There is no basis in medicine for Dr. Scheribel's statement that he can tell a radiation induced cataract from any other cataract because of its unique appearance."); Aff. of Dr. Cogan at ¶ 25 ("Dr. Scheribel's blanket assertion that any cataract with a clear area "fore and aft" must necessarily be radiation induced is wrong as a matter of medical science."); Aff. of Dr. Casarett at ¶ 11. ("Dr. Scheribel's assertation that posterior subcapsular cataracts can be identified as definitely being die to radiation exposure if

they have a clear area "fore and aft" of the cataract is wrong as a matter of medical science."); Aff. of Dr. Merriam at ¶¶ 23-26 ("Medical science simply cannot tell from looking at a cataract whether or not it was caused by a prior radiation exposure."). therefore, his opinion is more dangerous than an opinion lacking a verifiable scientific foundation The court finds that Dr. Scheribel's opinion must be excluded under Rules 703 and 403.

H. The *Frye* Test

Frye is not a rule but an evidentiary doctrine incorporated into Federal Rules of Evidence 702 and 703 by this Circuit that is designed to test the reliability of scientific evidence. *See United States v. Carmel*, 801 F.2d 997, 998-99 (7th Cir.1986) ("This Circuit...has reaffirmed the *Frye* standard subsequent to the passage of the Federal Rules of Evidence.") (citing *United States v. Tranowski*, 659 F.2d 750, 754-57 (7th Cir.1981)). It has been applied by the courts of this Circuit in both criminal and civil cases. *See, e.g., United States v. Carmel; Grove Fresh Dist., Inc. v. New England Apple Prods. Co.*, 1991 WL 169058 (no. 89C1115) (N.D.Ill., Aug. 27, 1991). part and parcel of the law interpreting the Federal Rules of Evidence, the *Frye* doctrine applies in all proceedings before the courts of this Circuit, both federal question and diversity. *See* Fed.R.Evid. 101; C. Wright, A. Miller & E. Cooper, 19 Federal Practice and Procedure § 4512 ("If a Rule of Evidence coves a disputed point of evidence, the Rule is to be followed, even in diversity cases, and the state law is pertinent only if and to the extent the Rule makes it so.").

[19] Plaintiff's contention that the direction of the Price-Anderson Act to apply certain state law somehow changes this is without merit. The Federal Rules of Evidence govern the admissibility of an expert's testimony in the federal courts. *See Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823, 825 n. 9 (D.C.Cir.1988), aff'd 857 F.2d 823 (D.C.App.), *cert. denied*, 493 U.S. 882, 110

S.Ct. 218, 107 L.Ed.2d 171 (1989); *Ealy v. Richardson-Merrell, Inc.*, 897 F.2d 1159, 1163 (D.C.Cir.1990), cert. denied, — U.S. —, 111 S.Ct. 370, 112 L.Ed.2d 332 (1990). Hence, unless the Price-Anderson Act was intended to supplant the Federal Rules of Evidence, admissibility of scientific evidence through opinion testimony will be governed by those Rules, even if substantive rights are affected. *See, e.g., Bushman v. Halm*, 798 F.2d 651, 660 n. 11 (3rd Cir.1986); c.f., *In re Sugar Indus. Antitrust Litig.*, 73 F.R.D. 322, 353 (E.D.Pa.1976) (any modification of existing substantive rights which may be caused by application of Fed.R.Evid. 703 and 403 cannot be avoided because these rules "result[ ] from...congressional enactment...and not from any exercise of the United States Supreme Court's power to promulgate rules of procedure.").

This case is subject to the Price-Anderson Act. *O'Conner V. Commonwealth Edison Co.*, 748 F.Supp. 672, 673 (C.D.Ill.1990); *O'Conner v. Commonwealth Edison Co.*, 770 F.Supp. 448 (C.D.Ill.1991). Although that Act expressly reserves application of state substantive law, it does not limit the applicability of the Federal Rules of Evidence here. Nor does it limit application of federal case law interpreting those rules. Thus, the court finds that the *Frye* doctrine must be applied here.

Even the state courts of Illinois would apply *Frye* here. *See People v. Jordan*, 103 Ill.2d 192, 82 Ill.Dec.925, 932, 469 N.E.2d 569, 576 (1894); *People v. Ferguson*, 172 Ill.App.3d 1, 122 Ill.Dec. 266, 271-72, 526 N.E.2d 525, 530-31 (2nd Dist.1988). Illinois Supreme Court Rule 220(a)(1) provides in pertinent part:

> An expert is a person who, because of education, training or experience, possesses knowledge of a specialized nature beyond that of the average person on a factual matter material to a claim or defense inpending litigation and who defense in pending litigation and who may be expected to render an opinion within his expertise at trial.

Rule 220(a)(1). The burden of establishing the expert's

qualifications rests on the proponent of his testimony. *Jordan,* 103 Ill.2d 192, 82 Ill.Dec. at 932, 469 N.E.2d at 576; *People v. Leahy,* 168 Ill.App.3d 643, 119 Ill.Dec.230, 234, 522 N.E.2d 892, 896 (2nd Dist. 1988). The qualification of an expert is within the sound discretion of the trial court. *Harris v. Granite City,* 8 Ill.Dec. 648, 52 Ill.App.3d 782, 785, 365 N.E.2d 1034, 1037 (5th Dist.1977); Graham, M. Cleary & Graham's Handbook of Illinois Evidence § 702.2 at 494-95. Thus, under state law, as under the federal rules, an expert must be qualified as an expert before giving expert opinion.

Further, the Illinois Supreme Court has adopted Federal Rule of Evidence 703 and, by inference, decisional law of this Circuit interpreting that rule. *Wilson v. Clark,* 84 Ill.2d 186, 49 Ill.Dec. 308, 417 N.E.2d 1322, cert. denied, 454 U.S. 836, 102 S.Ct. 140, 70 L.Ed.2d 117 (1981). Therefore, under state evidence law, the *Frye* doctrine must be applied; an expert must have a verifiable scientific basis for his opinion. Consequently, whether this court applies the Illinois Rules of Evidence or the Federal Rule of Evidence, the same analysis and result will obtain: unless Dr. Scheribel's proffered opinion passes the scrutiny of Rule 703 and *Frye,* it is not admissible.

Under *Frye,* the methodology and reasoning used by an expert to reach his conclusion must be generally accepted within the relevant scientific community. *United States v. Smith,* 869 F.2d 348, 351 (7th Cir.1989); *Tranowski,* 659 F.2d at 756; Christophersen, 939 F.2d at 1113; *Frye,* 293 F. at 1014; *Mercado v. Ahmed,* 756 F.Supp. 1097, 1102 (N.D.Ill.1991). Plaintiff erroneously argues that *Frye* does not apply to this case because it was "decided prior to the enactment of the Rule [sic] of Evidence" and because it is "absent from the advisory committee notes." Plaintiff's Brief at 10. However, the vitality of *Frye* is well established in the Seventh Circuit. See *United States v. Smith,* 869 F.2d 348, 351 (7th Cir.1989); *United States v. Carmel,* 801 F.2d 997, 999 (7th Cir.1986); *Tranowski,* 659 F.2d at 756. Moreover, none of the cases that employ the *Frye*

analysis limit its application to "criminal" cases as suggested by plaintiff. Thus, plaintiff's attempt to distinguish *Frye* is without merit.

Although generally an expert's conclusion may be admissible even when it is controversial or unique, it is not admissible when scientific truth has "so completely hardened as to prevent legitimate difference of true expert opinion in a particular concrete field." *Christophersen* 939 F.2d at 1111, n. 8 (quoting *Osborne v. Anchor Laboratories, Inc.*, 825 F.2d 908, 915 n. 10 (5th Cir.1987), *cert. denied*, 485 U.S. 1009, 108 S.Ct. 1476, 99 L.Ed.2d 705 (1988)).

I. Ruling on *Frye*

[20] Here, Dr. Scheribel's opinion is based on an underlying erroneous opinion that radiation induced cataracts are pathognomonic. This "binding universal rule" is not accepted by scientists who specializing the field of radiation induced cataracts. Aff. of Dr. Apple at ¶ 13; Aff. of Dr. Silberstein at ¶ 22; Aff. of Dr. Casarett at ¶ 11; Aff. of Dr. Cogan at ¶¶ 24-25; Aff. of Dr. Merriam at ¶¶ 22-26. Moreover, he has never proved the reliability of his dogmatic assertion, never having performed (or even reviewed) any studies on the subject. His opinion if further flawed because he did not consider the numerous variables that should have been considered in determining cause. For example, he did not consider all of the other conditions[10] in O'Conner's medical history that made it more likely that his cataracts resulted from those conditions rather than the minute radiation exposure that the record reflects he received, especially the fact that O'Conner's father also developed posterior subcapsular

10. Many conditions can cause posterior subcapsular cataracts. Among the many conditions that can cause them (and that are applicable to Mr. O'Conner) are congerital and hereditary factors, eye trauma, cortisone, prednisone, obesity, drugs prescribed for hypertension, sunlight, galactosemia, prolonged use of eye drops, chronic diarrhea and elevated triglyceride levels. Aff. of Dr, Apple at ¶ 12; Aff. of Dr. Merriam at ¶¶ 19; Dr. Bond's Dep. at 17; Dr. Nelson's Dep. at 23, 29, 32, 47; Dr. Ward's Dep. at 15-16, 18-19, 21-22, 29-30; Dr. Reardon's Dep. at 19-21.

cataracts at the age of 39.[11]

In Mid-State Fertilizer Co. v. Exchange Nat'l Bank, 877 F.2d 1333 (7th Cir.1989), plaintiff filed an affidavit by an expert that had no reasoning for the conclusions it contained. In affirming the trial court's granting of summary judgment, the appellate court observed that a court should not rely on an expert opinion that an expert "would not tolerate in his professional life." Id. at 1339. *See also Johnston*, 597 F.Supp. at 410 (if expert's opinion was given to "anyone other than a jury or this court he would become an immediate laughing stock!"). the court stated that "Judges should not be buffaloed by unreasoned expert opinion," and concluded:

> Ukase [an edict] in the guise of expertise is a plague in contemporary litigation. "The importance of safeguarding the integrity of the [judicial] process requires the trial [or appellate] judge, when he believes that an expert's testimony has fallen below professional standards, to say so, as many judges have done." [Citations omitted]. Professor Bryan cast aside his scholar's mantle and became a shill for [the plaintiff]; Judge Hart, by observing that the emperor had no clothes, protected the interests of the judicial system.

Mid-State Fertilizer Co., 877 F.2d at 1340. *See also Johnston*, 597 F.Supp. at 411 (rejecting experts "because they have become advocates for a cause and have therefore departed from the ranks of objective expert witnesses"). Each expert in the field of radiation induced cataracts, including Dr. Apple, on whose work Dr.

11. See. Aff. of Dr. McGrath attached to Supplement to Defendants' Reply to Plaintiff's Motion in Limine to Exclude Evidencor Reference to Dr. Philip McGrath of Plaintiff's Father's Eye Condition; Dr. O'Brien's Dep. at 52-53; Aff. of Dr. Cogan at ¶ 21; Aff. of Dr. Merriam at ¶ 17. Having a relative who develops cataracts at such a young age freatly increases the likelihoon of developing early cataracts. Aff. of Dr. Cogan at ¶ 23; Aff. of Dr. Merriam at ¶ 20; Dr. Bond's Dep. at 17. Yet, Mr. O'conner did not reveal this very significant fact to Dr. Scheribel who then failed to consider such an improtant predisposing factor before concluding that only radiation could have caused Mr. O'Conner's cataracts. Dr. Scheribel's Discovery Dep. at 23.

Scheribel claims to rely, has testified that Dr. Scheribel's reasoning and methodology are not accepted in the scientific community.

IV. EFFECT OF INADMISSIBILITY ON DUTY OWED

A. The Standard of Care Owed

[21] As has been determined previously by this court, the standard of care that a public utility licensee owes to radiation workers like O'Conner is to keep their radiation exposures from exceeding the permissible dose limits that have been established by the federal regulators. *O'Conner v. Commonwealth Edison Company,* 748 F.Supp. 672 (C.D.Ill.1990). Dose is a subject requiring expert testimony because it is well beyond the knowledge and expertise of any average person. The heart of Dr. Scheribel's testimony is that only radiation exposure received at Quad Cities could have caused plaintiff's cataracts. This opinion is inadmissible and medically invalid. Without it plaintiff has no expert opinion testimony or other admissible evidence from which a reasonable jury could even infer that O'Conner received a dose above the standards.

Plaintiff's allegation that, at times. doses were misrecorded is insufficient to supply the necessary exposure testimony because it is not expert testimony, it is not specific to his dose on the night of the alleged incident (October 3, 1983), and it does not establish that his dose exceeded the federal permissible dose limits. It remains only an allegation that is insufficient to fore stall summary judgment under Rule 56(e). Nor does the testimony of Jessie Wilson supply what is missing here: admissible expert opinion testimony that plaintiff's dose exceeded ;the federal permissible dose limits. Mr. Wilson's testimony is only that on one occasion in 1981, two years before the alleged incident, at a time when O'Conner was not even employed at Quad Cities, a technician made a mistake in recording Mr. Wilson's daily SRPD reading and

promptly changed it when Mr. Wilson called it to his attention. Mr. Wilson's Dep. at 65. This isolated incident is insufficient, taken alone or together with the rest of plaintiff's evidence in the record, to give rise to a reasonable inference that the radiation dose he received at Quad Cities exceeded the federal permissible dose limits.

Although on the surface Dr. Scheribel's opinion at issue here seems to be a causation opinion, it is also a medical opinion which serves, if admissible, as the only basis upon which the plaintiff can argue an inference of breach of the duty owed. Since it is not admissible under Rule 702, Rule 703 or Frye, if plaintiff us unable to offer any other expert opinion testimony that his dose exceeded the 12 rem per year (or 3 rem per calendar quarter) permissible dose limits, summary judgment must be granted to the defendants on the duty owed issue. Of course, Dr. Scheribel is not an expert on dosimetry and therefore, is not qualified to five any opinion on dose and, as shown above, his erroneous "binding universal rule" is not binding, is not universal, is not a rule, and is nor admissible.

B. the Other Evidence Plaintiff Offers

O'Conner has not been able to offer any testimony by a qualified witness that his dose exceeded the permissible dose limits. Plaintiff's only dose expert is Dr. Martin Welt. Counsel for plaintiff took Dr. Welt's Evidence Deposition on March 17, 1989 because Dr. Welt was scheduled to be incarcerated in a deferral prison at the time this case was originally scheduled for trial. De Welt's Dep. at 176-77. Dr. Welt admitted at that deposition that he had been convicted in federal court of (1) participating in a conspiracy to defraud the United States, and to lie to the NRC; (2) causing a food irradiation plant to be operated by defeated safety interlocks; (3) causing others to lie to the NRC; (4) lying to NRC investigators; and (5) preparing a false, backdated document. Dr. Welt's Dep. at 173-76. Dr. Welt testified that it is "highly unlikely" that O'Conner received

the dose he represented to his doctors, that the maximum dose he could have received was only 50% more than the dosimeters recorded, and that there was no violation of the standard of care here:

Q. You indicated in your direct examination, that you agreed that it's highly unlikely that Mr. O'Conner got 300 or 400 rads of exposure that he told his doctors that he received.

A. That is correct.

Dr. Welt's Dep. at 47.

Q. On July 5th 1988 you wrote a letter to Mr. Janssen which contained your opinion on the dose which Mr. O'Conner received. Isn't that correct?

A. Correct.

Q. And in that area you indicated that this dose was as recorded by the measuring devices plus 50%, correct?

A. Right. I said that would be the maximum of the limit.

Q. Do you stand by that?

A. Yes.

Dr. Welt's Dep. at 55-56.

Q. Do you believe that the radiation safety officer violated the standard of care by allowing Mr. O'Conner to receive the 45 millirem dose [.045 rem] recorded by his self-reading pocket dosimeter?

A. No.

Dr. Welt's Dep. at 49.

The limits of Dr. Welt's opinion are clear. Even if O'Conner received 50% more than his dosimeters actually measured, his dose would not exceed 3 rem per calendar quarter or 12 rem per year. Dr. Welt's opinion does not get O'Conner past the duty owed. No reasonable jury could conclude on this evidence that the plaintiff has proven a violation of the duty owed.

C. Conclusion on Duty Owed

After seven years of extensive litigation, plaintiff has been unable to offer any admissible evidence upon which a reasonable jury could conclude that the dose of radiation which he received at Quad Cities was sufficient to have violated the duty owed. Indeed, the only reasonable conclusion which a jury could reach upon the evidence presented in this case is that his dose of radiation was well within the duty owed. Since plaintiff, after adequate time for discovery, has failed to make a showing sufficient to establish the existence of an element (breach of duty owed) essential to his case, Rule 56(c) mandates the entry of summary judgment. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322, 106 S.Ct. 2548, 2552, 91 L.Ed.2d 265 (1986).

V. EFFECT OF INADMISSIBILITY ON CAUSATION

A. The Standard

[22] To prove causation, plaintiff must introduce expert testimony to a reasonable degree of medical certainty that his alleged injuries were caused by his radiation exposure. *Warner/Elektra/Atlantic Corp. v. County of DuPage*, 762 F.Supp. 784, 788 (N.D.Ill.1991); *McCord-Shell v. Volkswagen of America, Inc.*, 736 F.Supp. 172, 173-74 (N.D.Ill.1990).

B. The Other Evidence Plaintiff Offers

No other medical witnesses offered by the plaintiff have testified based on an adequate factual of scientific foundation with a reasonable degree of medical certainty that O'Conner's cataracts were caused by radiation. During the course of this case, plaintiff has consulted with and has been evaluated by at least four other ophthalmologists, Drs. William bond, Robert Reardon, John Nelson and Clarence Ward. Consistent with consensus science,

each of these four physicians testified in agreement with defendants' experts that radiation induced cataracts are not pathognomonic but rather, only are characteristic.

No other medical witnesses offered by the plaintiff have testified with a reasonable degree of medical certainty that O'Conner received any other physical injury as a result of his radiation exposure. However, in addition to alleging that radiation exposure caused his cataracts, plaintiff alleged, but failed to substantiate with expert testimony, that the radiation exposure caused his bones to have contractions; a groin rash; difficulty breathing; his fingernails to become powdery and break off; his hair to fall out; and elevated triglyceride levels. O'Conner's Dep. at 50, 53, 55; Plaintiff's pre-Trial Memorandum at 6. His physician, Dr. Bullock has testified that:

> There were no clinical tests that I made that showed abnormalities.

Dr. Bullock's Dep. at 36.

> Q. So your impression...is based only upon what he told you and what he reported in the history to you?
>
> A. Yes.

Dr. Bullock's Dep. at 35-36. Dr. Ichtertz has testified:

> Q. With regard to Mr. O'Conner's pulmonary complaints...are you treating other patients with those same symptoms who have not been exposed to radiation?
>
> A. Sure. Many of them. It's common symptoms.

***

> Q. And based on what Mr. O'Conner told you...it was because of that that you attributed his pulmonary complaints and problems to radiation exposure, isn't that true?
>
> A. That's correct.

Dr. Ichtertz's Dep. at 24-25. Dr. LeGrand has testified:

A. ...I must admit to be fair to say that I was not able to determine by my examination on a consistent basis any clinical evidence of significant either acute or chronic changes one might see with radiation exposure.

Dr. LeGrand's Dep. at 21.

A. I was never able to find any significant evidence of bronchial spasm...He had indicated to me that at times he was breathless, but he admitted that he was relatively sedentary...

Dr. LeGrand's Dep. at 13.

Without question, the most thorough and skilled medical examination that was performed on O'Conner in an attempt to detect any possible physical effects of his alleged "radiation overexposure" was the complete work-up performed by Dr. Edward B. Silberstein at the E.L. Saenger Radioisotope Laboratory. Dr. Silberstein concluded:

> While the sensitivity of presently existing biological testing cannot eliminate the possibility that Mr., O'Conner was exposed to a dose below 25 rem, there is no medical evidence to suggest that he received a dose greater than the dose recorded by his film badge...His own blood proves that he did not get a dose of 400 rem as he claims. The dose which he did receive had no visible biological effect upon him which medical testing could demonstrate.

Aff. of Dr. Silberstein at ¶ 23. Plaintiff has failed to provide any evidence of any adverse medical effect from his exposure to occupational levels of radiation below the federal permissible dose limits. No reasonable jury could conclude otherwise.

C. Conclusion on Causation

After seven years of extensive litigation and numerous medical examinations, plaintiff has been unable to make a

sufficient showing to establish the existence of an element (causation) essential to his case. The only reasonable conclusion a jury would come to is that his dose was about 4444 times too small to have caused his cataracts. Consequently, on causation, as well as on duty owed, entry of summary judgment is mandated for the defendants. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322, 106 S.Ct. 2548, 2552, 91 L.Ed.2d 265 (1986).

VI. CONCLUSION

In sum, the court GRANTS the defendants' Motion to Exclude the indicated portions of Dr. Scheribel's testimony and also GRANTS the defendants' Motion for Summary Judgment on the basis that the evidence then remaining in this case is insufficient to establish the existence of elements (breach of duty and causation) essential to plaintiff's case and upon which plaintiff will bear the burden of proof at trial. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322, 106 S. Ct. 2548, 2552, 91 L.Ed.2d 265 (1986).

The clerk is directed to enter judgment for the defendants and against plaintiff on all claims.

APPENDIX C

JAMES R. O'CONNER,
Plaintiff,
vs.
COMMONWEALTH EDISON COMPANY,a Corporation
and LONDON NUCLEAR SERVICES, INC.,
a Foreign Corporation,
Defendants.

No. 88-1272.

United States District Court,
C.D. Illinois,

July 10, 1991.

Jay H. Janssen, Peoria, Ill., for plaintiff.
Rex Linder, Peoria, Ill., Terrence E. Kiwala, Chicago, Ill., Donald E.Jose, Philadelphia, Pa., for defendants.

ORDER

MIHM, District Judge.

Before the Court is a Motion by the Plaintiff for remand of this case to state court based upon the assertion that the Price-Anderson Amendments Act of 1988, 42 U.S.C. § 2210(n)(2), which provides removal of cases such as this to United States District Courts, is unconstitutional.[1] This Court finds that the Act is constitutional and denies the Motion to Remand for the reasons stated herein.

JURISDICTION

On October 1, 1985, this action was commenced by O'Conner in the Circuit Court of the Tenth Judicial Circuit Court of Illinois in Tazewell County.[2] O'Conner's Complaint alleged that he was a radiation worker for London Nuclear Services which had hired O'Conner to work as a pipe fitter in construction repair operations at the Commonwealth Edison Nuclear Power Plant in Cordova, Illinois. Commonwealth Edison is a public utility and London Nuclear Services was its contractor performing services at the nuclear power plant. In both counts of his Complaint, O'Conner alleged that the Defendants negligently exposed O'Conner to radiation which caused various injuries.

On September 13, 1988, the Defendants removed this

1. This Motion was originally filed as a notice of a claim of unconstitutionality (#138) and was filed on February 12, 1991. However, it is clear that the notice was in effect a motion to remand based upon the discussion held at the hearing on February 12, 1991. Further, pursuant to the notice given by the Plaintiff, the United States was given an opportunity to intervene under 28 U.S.C. § 2403. The United States has intervened and filed briefs in this case.
2. For additional background on this case see a previous order in O'Conner v. Commonwealth Edison, 748 F.Supp. 672 (C.D.Ill.1990).

case as a "public liability action" under 42 U.S.C. § 2210(n)(2). The Defendants assert that this case is a "public liability action" (under the Price-Anderson Act as amended in 1988) by a radiation worker against an Illinois public utility and its contractor. See, 42 U.S.C. § 2014(hh), (w), (q).

O'Conner filed an objection to the removal on September 23, 1988. The Defendants responded to this objection on November 1, 1988. O'Conner then filed a reply on November 28, 1988. Finally, on December 8, 1988, the Defendants filed another reply. (See, documents #5, #7, #9, #10). The Magistrate held a hearing on the objection to the Petition for Removal on January 5, 1989. He denied O'Conner's request for remand by docket entry on that same date.[3]

O'Conner asserts that, if the Atomic Energy Act preempts state court jurisdiction, that preemption is limited solely to the Exclusive jurisdiction of the federal government to control the standards and methods of regulation only and does not preempt state court jurisdiction premised upon common law negligence. *See, Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 104 S.Ct. 615, 78 L.Ed.2d 443 (1984). Further, O'Conner asserts that the sole purpose of the Price-Anderson Act is applicable only if the verdict potential material exceeds $60,000,000, and only if the government must implement the indemnification procedures of the Price-Anderson Act. O'Conner notes that the joint committee report on the original version of the Price-Anderson Act indicated this limited need was the sole purpose of a limited scope of federal court intervention:

Since the rights of third parties who are injured are established by state law, there is no interference with the state law until there is likelihood that the damages exceed the amount of financial responsibility required together

3. Since a written order has never been entered directly addressing the objections to the Petition for Removal, this Court feels obliged at this time to briefly consider these objections as they are somewhat related to the constitutional challenge in this case.

with the amount of the indemnity,. At that point the federal interference is limited to the prohibition of making payments to the state courts and to pro rating the proceeds available.
S.Rep. No. 296, 85th Cong., 1st Sess. 9 (1956).

As the Defendants note, however, their Petition for Removal is based upon the Price-Anderson Act of 1988 which amended the Atomic Energy Act of 1954 to provide for retroactive federal court jurisdiction over claims involving a "nuclear incident." The Price-Anderson Act amendments of 1988 broadened the scope of the Atomic Energy Act to apply to individual claims of personal injury arising out of radiation exposure. Sections 11(a)(1)(A) and (B) and § 11(a)(2) of the Price-Anderson Act amendments of 1988 amend § 170(n)(2) of the Atomic Energy Act of 1954 (42 U.S.C. § 2210(n)(2)) by striking the clause "an extraordinary nuclear occurrence" each place it appears and inserting the clause "a nuclear incident." 42 U.S.C. § 2210(n)(2) now reads as follows:

> With respect to any *public liability action* arising out of or resulting from a nuclear incident, the United States District Court in the district where the nuclear incident takes place, or in the case of a nuclear incident taking place outside the United States, the United States District Court for the District of Columbia, *shall have original jurisdiction without regard to the citizenship of any party or the amount in controversy.* Upon motion of the defendant or of the Commission, or the Secretary, as appropriate, any such action pending in any state court (including any such action pending on August 20, 1988) or United States District Court shall be removed or transferred to the United States District Court having venue under this subsection....(Emphasis added).

The key terms to determine whether removal is proper are "public liability action " and "nuclear incident" as "any occurrence" which causes an injury resulting from toxic

exposure to radiation. Specifically, the Atomic Energy Act provides:

> The term "nuclear incident" means *any occurrence*, including an extraordinary nuclear occurrence, within the United States causing ... bodily injury, sickness, disease, or death, or loss or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, specia nuclea, or by-product material....

42 U.S.C. § 2014(q) (emphasis added).

Section 11(b) of the Price-Anderson Act amendments of 1988 defines a "public liability action" as follows:

> *The term "public liability action", as used in section 2210 of this title, means any suit asserting public liability.* A public liability action shall be deemed to be an action arising under section 2210 of this title, and the substantive rules for decision in such action shall be derived from the law of the state in which the nuclear incident involved occurs, *unless such law is inconsistent with the provisions of such section.*

42 U.S.C. § 2014(hh) (emphasis added). 42 U.S.C. § 2014(w) defining "public liability" provides in relevant part:

> The term "public liability" means any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation.... (Emphasis added).

[1] After examining the amendments to the Atomic Energy Act by the Price-Anderson Act amendments of 1988, this Court concludes that the plain language of the Act, as amended, shows that Congress's intent was to broaden the scope of the Act and thereby expand coverage to individual incidents of claimed personal injury from radiation exposure. It is clear that this litigation involves a "public liability action" under 42 U.S.C. § 2210(n)(2), because this is a suit asserting "public liability" under 42

U.S.C. § 2014(hh). The alleged legal liability in this action arises out of a "nuclear incident" under 42 U.S.C. § 2014(w) as defined under the broad definition of "nuclear incident" given by the Act under 42 U.S.C. § 2014(q). Therefore, this Court has jurisdiction of this action.

DISCUSSION

O'Conner has now asserted that this case should be remanded to state court because the removal was premised upon an unconstitutional statute, 42 U.S.C. § 2210(n)(2). O'Conner asserts that the statute is unconstitutional because Congress exceeded the scope of Article III, Section 2 of the United States Constitution by granting federal courts subject matter jurisdiction in this case. Second, O'Conner contends that the Price-Anderson Act unconstitutionally interferes with state sovereignty by divesting a state sovereignty by divesting a state judicial system of jurisdiction over a pending case. Third, O'Conner maintains that retroactive application of the removal provision violates the due process clause of the Fifth Amendment is violated by increasing the compensation fund for cases in the future while failing to increase that fund for pending cases.

The United States and the Defendants in this case oppose this motion.

I. *Does Congress's Enactment of 42 U.S.C. § 2210(n)(2) Exceed the Scope of Article III of the United States Constitution?*

O'Conner first asserts that cases arising under the 1988 Price-Anderson Act Amendments do not arise under federal law. *See, Stibitz v. General Public Utility Corp.*, 746 F.2d 993 (3rd Cir.1984), *cert. denied*, 469 U.S. 1214, 105 SCt. 1187, 84 L.Ed.2d 334 (1985); *Kiick v. Metropolitan Edison Company,* 784 F.2d 490 (3rd Cir.1986); *Commonwealth of Pennsylvania v. General Public Utilities*

Corp., 710 F.2d 117 (3rd Cir.1983); *Duke Power Company v. Carolina Environmental Study Group*, 438 U.S. 59, 98 S.Ct. 2620, 57 L.Ed.2d 595 (1978); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 104 S.Ct. 615, 78 L.Ed.2d 443 (1984). Based on the foregoing cases, O'Conner asserts that Congress never intended the Price-Anderson Act to create federal substantive law supporting arising under jurisdiction in Article III, Section 2 of the United States Constitution.

This Court disagrees with O'Conner's analysis for several reasons. First, each of the cases cited by O'Conner are inapplicable to the present case because of the subsequent passage of the Price-Anderson Act amendments of 1988. Second, under certain circumstances, this Court believes that Congress has the power to incorporate state law so that state law is essentially federalized. Finally, even if the state rules of decision which ar incorporated in "public liability actions" under this Act would not be regarded as federal law, this Court concludes that Article III nonetheless authorizes federal jurisdiction given the extensive federal questions inherent in cases litigated under this Act.

Initially, this Court would note that it is clear the Congress could have preempted all state law and common law causes of actions involving nuclear incidents or nuclear power under the commerce clause of Article I, Section 8 of the United States Constitution as long as Congress provided an alternative remedy for potential plaintiffs. *See, Duke Power*, 438 U.S. at 87-89, 98 S.Ct. at 2637-39. In *Duke Power*, the Supreme Court considered a claim that the Act's provision limiting total liability to $560,000,000 violated due process because the Act failed to provide those injured by a nuclear accident with the satisfactory *quid pro quo* for the common law rights of recovery which the Act abrogated. *Id.* at 87-88, 98 S.Ct. at 2637-38. The Supreme Court stated in relevant part:

> The remaining due process objection to the liability-limitation provisions is that it fails to provide

> those injured by a nuclear accident with a satisfactory *quid pro quo* for the common-law rights of recovery which the Act abrogates. Initially, it is not at all clear that the due process clause in fact requires that a legislatively enacted compensation scheme either duplicate the remedy at common law or provide a reasonable substitute remedy. (Footnote omitted). *However, we need not resolve this question her since the Price-Anderson Act does, in our view, provide a reasonably just substitute for the common-law or state tort law remedies it replaces.* Cf. *New York Central R. Co. v. White*, 243 U.S. 188 [37 S.Ct.247, 61 L.Ed. 667] (1917); Crowell v. Benson, 285 U.S. 22 [52 S.Ct. 285, 76 L.Ed. 598] (1932). (Footnote omitted).

The legislative history of the liability-limitation provisions and the accompanying compensation mechanism reflects Congress's determination that reliance on state tort law remedies and state-court procedures was an unsatisfactory approach to assuring public compensation for nuclear accidents, while at the same time providing the necessary incentives for private development of nuclear-produced energy.

Id. at 87-089, 98 S.Ct. at 2638 (emphasis added). The Supreme Court further added in relevant part in a footnote:

> Appellee's only relevant right prior to the enactment of the Price-Anderson Act was to utilize their exiting common-law and state-law remedies to vindicate any particular harm visited on them from whatever sources. *After the Act was passed, that right at least with regard to nuclear accidents was replaced by the compensation mechanism of the statute, and it is only the terms of that substitution which are pertinent to the quid pro quo inquiry which appellees insist the due process clause requires.*

Id. at 88-89 n. 32, 98 S.Ct. at 2638 n. 32 (emphasis added).

The *Duke Power* case involved a suit by a number of individuals who lived near certain nuclear plants to challenge the $560,000,000 limitation on liability for nuclear accidents. Before the 1988 amendments to the Price-Anderson Act, the individuals living around the nuclear power plants could have asserted a public liability action under 42 U.S.C. § 2210(n)(2) only where there was an "extraordinary nuclear occurrence." In this context, as is clear from the quoted material above, the Supreme Court found that the remedies allowed in the Price-Anderson Act were sufficient. *Id.* at 87-89, 98 S.Ct. at 2637-39. As discussed earlier in the Price-Anderson Act amendments of 1988, Congress created jurisdiction for claims arising out of "nuclear incidents." See, 42 U.S.C. § 2210(n)(2). Thus, it appears that Congress intended that the law give rise to individual actions under the Price-Anderson Act.

Implicit in the discussion in the *Duke Power* case is that Congress has the power to federalize, at the very least, state tort law remedies. Congress also has the power to federalize state tort law, as it has done under the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1331 et *seq.* Under the OCSLA, Congress extended the application of the Constitution and laws in the civil and political jurisdiction of the United States to the outer continental shelf to the same extent as if the outer continental shelf were an area of exclusive federal jurisdiction located within a state. 43 U.S.C. § 1333(a)(1). Since federal law might not readily supply answers to the full range of potential legal problems arising on the shelf, Congress declared that the civil and criminal laws of each adjacent state were declared to be the laws of the United States on the outer continental shelf to the extent that they were applicable and not inconsistent with the OCSLA. 43 U.S.C. § 1333(a)(2);' *Rodrique v. Aetna Casualty Company*, 395 U.S. 352, 356-357, 89 S.Ct. 1835, 1937-38, 23 L.Ed.2d 360 (1969) (OCSLA provides for exclusive regulation by federal law with state law adopted as surrogate federal law).

Congress then provided that district courts would have jurisdiction of cases and controversies arising out of or in connection with any operation conducted on the outer continental shelf. 43 U.S.C. § 1349(b)(1). The jurisdiction of the federal courts to hear OCSLA cases where state law by its incorporation under the Act provides the content of the federal rules of decision has not been seriously questioned. *See, Rodrique*, 395 U.S. AT 356-357, 89 S.Ct. at 1837-38; *Tidelands Royalty Corp. v. Gulf Oil Corp.*, 804 F.2d 1344, 1347 n. 1 (5th Cir. 1986); *Laredo Offshore Constructors v. Hunt Oil Company*, 754 F.2d 1223, 1225 (5th Cir.1985); *Hughes v. Lister Diesels*, 642 F.Supp. 233 (E.D. La. 1986).

O'Conner asserts that the OCSLA legislative scheme is distinguishable because Congress was legislating over a territory as to which it had exclusive property interests. This Court disagrees because it believes that Congress has jurisdiction over interstate commerce just as it has jurisdiction over federal territory. Congress would have the same power to federalize state causes of action asserting either basis for jurisdiction.

[2] In this case, under the Price-Anderson Act amendments, Congress has essentially federalized state common law by including "nuclear incidents" under the statute granting jurisdiction to federal courts. See, 42 U.S.C. § 2210(n)(2). The legislative history supports this position. In its report on H.R. 1414, the house version of the amendments, the Committee on Interior and Insular Affairs explains Congress's intent as follows:

> The Committee recognizes, of course, that Article III of the Constitution limits the types of cases that federal courts created under that Article may adhere. *For this reason, H.R. 1414 expressly states that any suit asserting public liability shall be deemed to be an action arising under the Price-Anderson Act, thereby making suit asserting public liability "cases ... arising under ... the laws of the United States" within the meaning of Article III.* Rather than designing a new body of substantive

> law to govern such cases, however, the bill provides that the substantive rules for decision in such actions shall be derived from the law of the state in which the nuclear incident involved occurs, unless such law is inconsistent with the Price-Anderson Act. *The Committee believes that conferring on the federal courts jurisdiction over claims arising out of all nuclear incidents in this manner is within the constitutional authority of Congress and notes that Congress has used this approach in the Outer Continental Shelf Lands Act.*

H.R.Rep. No. 104, 100th Cong., 1st Sess., Part 1 at 18 (emphasis added).

Even if the state rules of decisions which are incorporated in public liability actions under the Price-Anderson Act would not be regarded as federal law, this Court believes that Article III nonetheless authorizes federal jurisdiction because federal questions will inherently arise in cases litigated under this Act. In other words, there is a significant federal ingredient to any cause of action asserted under the Price-Anderson Act.

The primary case relied on by O'Conner for the proposition that Congress cannot create Article III jurisdiction where there is no federal substantive law creating the cause of action is *In re TMI Coordinated Proceedings*, 735 F.Supp. 640 (M.D.Penn. 1990), appeal argued, 940 F.2d 832 (3rd Cir.1991). The *TMI* case held that Congress exceeded the scope of Article III by granting, through the Price-Anderson Act Amendments, subject matter jurisdiction to federal courts over public liability actions arising out of any nuclear incident. The court relied on *Osborn v. Bank of United States*, 22 U.S. (9 Wheat.) 738, 6 L.Ed. 204 ()1824) and *Verlinden v. Central Bank of Nigeria,* 461 U.S. 480, 103 S.Ct. 1962, 76 L.Ed.2d 81 (1983), in reaching its conclusions. The *TMI* court reasoned that there would be no need to interpret numerous points of federal law or to apply a body of substantive federal law; therefore, Congress had exceeded its power to grant federal courts

jurisdiction under Article III.

This Court respectfully disagrees with the conclusions of the *TMI* court. Numerous federal questions will necessarily arise in the course of litigation under this Act, which questions must be resolved consistent with the pervasive federal scheme. In *Osborn,* the court was called upon to decide whether Congress could, consistent with Article III of the Constitution, grant jurisdiction to federal courts to hear cases brought by the Bank of the United States to vindicate rights based upon state law. Quoting from *Osborn,* the court in *Verlinden* stated:

> The rule is laid down that "it [is] a sufficient foundation for jurisdiction, that the title or right set up by the party, may be defeated by one construction of the constitution or law[s] of the United States, and sustained by the opposite construction." *Osborn* thus reflects a broad conception of "arising under" jurisdiction, according to which Congress may confer on the federal courts jurisdiction over any case or controversy that might call for the application of federal law.

Verlinden, 461 U.S. at 492, 103 S.Ct. at 1970-71 (quoting *Osborn,* 22 U.S. at 822).

The Price-Anderson Act clearly calls for the application of federal law. Initially, it must be determined as a threshold matter of federal law whether the action potentially involves a "nuclear incident" causing damage to property or persons under 42 U.S.C. § 2014(q).

Other federal questions will also arise in the course of all public liability litigation. *See, Stibitz,* 746 F.2d at 996. The Price-Anderson Act itself not only creates a cause of action u nder 42 U.S.C. § 2014(hh). It also provides a period of limitations for that cause of action at 42 U.S.C. § 2210(n)(1); it provides for venue at § 2210(n)(2); it provides for choice of law at § 2014(hh); it specifies limitations on punitive damages at § 2210(s); it channels liability to licensees notwithstanding the fact that they may have done no wrong at §2014(t); it adopts an industry

share liability rule at § 2210(b); it requires waivers of defenses under certain circumstances at § 2210(n)(1); and it establishes an upper bound on aggregate liability at § 2210(e). Thus, this Court believes that the Act itself contains numerous provisions of substantive federal law applicable to public liability actions.[4]

Further, as noted earlier, the Price-anderson Act explicitly provides as follows:

> The term "public liability action," as used in § 2210 of this title, means any suit asserting public liability. A public liability action shall be deemed to be an action arising under § 2210 of this title, and the substantive rules for decision in such action shall be derived from the law of the state in which the nuclear incident involved occurs, *unless such law is inconsistent with the provisions of such section.*

42 U.S.C. § 2014(hh). Under this section, even if the claim is one within the federal compensation scheme, it remains to be decided, as a matter of federal law, whether the state laws applied are inconsistent with federal law and policy embodied under the Act. This determination limits state law any may raise a federal question sufficient for Article III jurisdiction.[5]

Furthermore, the opinions cited by O'Conner which construed the Price-Anderson Act prior to its amendment would not reach a different conclusion. The question in *Stibitz,* 746 F.2d 993 and *Kiick,* 784 F.2d 490, was whether

4. This Court has previously been required to resolve the question of whether the Price-Anderson Act waived defenses in this case in an earlier order. See, O'Sonner v. Commonwealth Edison, 748 F.Supp. 672-674-675 (C.D.Ill.1990). Also, in this Court's prior opinion, this Court found that it was necessary under § 2014(hh) to consider federal regulations on permissible dose limits in determining the duty owed by the Defendants to O'Conner. Id. at 678.

5. It should be noted that the Defendants and the United States assert that Congress may create protective jurisdiction as to cases which may on their face seem to present purely questions of state law when they arise in the context of a pervasive federal province or program. It is unnecessary to consider this argument because this Court has concluded that it has "arising under" jurisdiction pursuant to Artivle III of the United States Constitution. This Court would note that the Supreme Court in the Verlinden case did not consider this argument where it found that Article III arising under jurisdiction was present. See, Verlinden, 461 U.S. at 491 n. 17, 103 S.Ct. at 1970 n. 17.

there was jurisdiction under 28 U.S.C. § 1331. In determining whether or not there is a federal question under § 1331 a court applies the well-pleaded complaint rule which provides that:

> for purposes of statutory "arising under" jurisdiction,...the federal question must appear on the face of a well-pleaded complaint and may not enter in anticipation of a defense. (Citations omitted).

Verlinden, 461 U.S. at 494, 103 S.Ct. at 1971. Although the language of § 1331 parallels the "arising under" jurisdiction is not identical to Article III "arising under" jurisdiction. *Id.* The Supreme Court has stated:

As these decisions make clear, Article III "arising under" jurisdiction is broader than federal-question jurisdiction under § 1331, and the Court of Appeals heavy reliance on decisions construing that statute was misplaced. (Footnote omitted). *Id.* at 495, 103 S.Ct. at 1972. Thus, cases such as *Stibitz* and *Kiick* which decided whether there is federal question jurisdiction under § 1331 are not controlling in determining the power of Congress to confer jurisdiction of the federal courts under Article III, Section 2 of the United States Constitution.

In addition, the *Commonwealth of Pennsylvania* case was not decided under the Price-Anderson Act amendments of 1988, and it merely held that there was nothing in the statute or the legislative history of the Price-Anderson Act amendments indicating that the federal courts should adopt and apply some form of *federal common law* to the issues of liability *and recoverable damaged for nuclear incidents. See, Commonwealth of Pennsylvania,* 710 F.2d. at 121-122.

Moreover, the *Silkwood* case involved the interpretation of the legislative history of the Price-Anderson Act prior to the 1988 amendments. *Silkwood,* 464 U.S. 238, 104 S.Ct. 615, 78 L.ed.2d 443. And, *Duke Power's* comments that the Price-Anderson did not create a federal cause of action were also made before the 1988 amendments to the Price-Anderson Act.

II. *Do the Price-Anderson Act Amendments of 1988 Unconstitutionally Interfere With the State's Sovereignty by Divesting a State Judicial System of Jurisdiction Over a Pending Case?*

[3] O'Conner asserts that the 1988 Amendments are invalid as a violation of the Tenth Amendment because they interfere with state sovereignty by divesting a state judicial system of jurisdiction over a pending case. *See, Garcia v. San Antonio Metropolitan Transit Authority,* 469 U.S. 528, 105 S.Ct. 1005, 83 L.Ed.2d 1016 (1985). This argument is rejected because no state sovereignty question is implicated. The states are not being directed to comply with federal law which is inconsistent with the exercise of their own sovereign rights. *Id.* at 548-549, 105 S.Ct. at 1016-17; *see also, Tennessee v. Davis*, 100 U.S. 257, 266-267, 25 L.Ed. 648 (1880); *Greenwood v. Peacock,* 384 U.S. 808, 833, 86 S.Ct. 1800, 1815, 16 L.Ed.2d 944 (1966).

III. *Does Retroactive Application of the Removal Provision Under the Price-Anderson Act Amendments Violate the Due Process Clause of the Fifth Amendments?*

O'Conner contends that, under the due process clause of the Constitution, Congress cannot give federal courts jurisdiction over actions that arose prior to the passage of the 1988 Price-Anderson Act Amendments.

[4] In making his assertion, O'Conner overlooks compelling established precedent that Congress may authorize removal of actions already pending in state courts to federal courts. *See, Railway Company v. Whitton's Administrator,* 80 U.S. (13 Wall.) 270, 20 L.Ed. 571 (1871). The validity of applying the removal mechanism in the 1988 Price-Anderson Act Amendments to actions filed before enactment of the statute depends on whether such retroactive application is a rational means of achieving a legitimate congressional purpose. *See, Pension Benefit Guaranty Corp. v. R.A. Gray and Company*, 467 U.S. 717,

729-730, 104 S.Ct. 2709, 2717-18, 81 L.Ed.2d 601 (1984); *Usery v. Turner Elkhorn Mining Company*, 428 U.S. 1, 15-19, 96 S.Ct. 2882, 2892-94, 49 L.Ed.2d 752 (1976); *Terson Company v. Bakery Drivers and Salesman Local 194*, 739 F.2d 118, 120-121 (3rd Cir.1984).

[5] Under the Price-Anderson Act Amendments, Congress wanted to facilitate equitable and uniform treatment of victims of nuclear incidents within their own states in insure the orderly distribution of funds to such victims and to encourage consolidation of public liability actions that presented similar issues. *See,* H.R.Rep. No. 104, 100th Cong. 1st Sess., Part 1 at 18, 29, Part 3 at 30; S.Rep. No. 218, 100th Cong. 1st Sess. at 13 U.S. Code Cong. & Admin.News 1988, pp. 1424, 1488. These goals are plainly legitimate, and creating removal jurisdiction over pending public liability actions was a rational means to achieve these goals. *See, In re Consolidated United States Atmospheric Testing Litigation*, 820 F.2d 982, 990 (9th Cir,1987), *cert. denied, Konizeski v. Livermore Labs,* 485 U.S. 905, 108 S.Ct. 1076, 99 L.Ed.2d 235 (1988); *Hammond v. United States,* 786 F.2d 8, 13-14 (1st Cir.1986); *Sowell v. American Cyanamid Company*, 888 F.2d 802, 805 (11th Cir.1989).

IV. *Do the 1988 Price-Anderson Act Amendments Violate the Equal Protection Clause of the Fourteenth Amendments?*

O'Conner maintains that the 1988 Amendments to the Price-anderson ACt violate the equal protection clause because they create two classes of victims—victims of past nuclear incidents and those of future nuclear incidents—in which the future victims have a larger compensation fund available. Because mo legitimate governmental purpose has been identified for allowing future victims to have available a significantly larger compensation fund, O'Conner contends that even the application of the lowest level of scrutiny under *Frontiero v. Richardson,* 411 U.S.

677, 93 S.Ct. 1764, 36 L.Ed.2d 583 (1973) yields the conclusion that the equal protection clause has been violated.

[6,7] Again, this Court rejects Plaintiff's analysis. The specific amount of funds available to satisfy all public liability claims arising from a single nuclear incident is determined by the funds available at the time of the nuclear incident and not by the size of the fund at the time a claim is filed. *See, Duke Power Company*, 438 U.S. at 63-67, 98 S.Ct. at 2625-27; 42 U.S.C. § 2210. It is clearly reasonable for Congress to periodically increase the compensation fund for future victims of nuclear incidents in anticipation of inflation and increased costs. *See also, Duke Power*, 438 U.S. at 63-67, 92-94, 98 S.Ct. at 2625-27.,2640-41.

CONCLUSION

Based on the foregoing, this Court DENIES O'Conner's Motion to Remand.

APPENDIX D

JAMES R. O'CONNER,
Plaintiff,
vs.
COMMONWEALTH EDISON COMPANY a Corporation,
and LONDON NUCLEAR SERVICES, INC.,
a Foreign Corporation
Defendants.

No. 88-1272.

United States District Court,
C.D. Illinois.

Sept. 26, 1990.

Jay H. Janssen, Peoria, Ill., for plaintiff.
Rex K.Linder, Peoria, Ill., Terrence E. Kiwala, Chicago, Ill., Donald E. Jose, Philadelphia, Pa., for defendants

ORDER

MIHM, District Judge.

Before the Court are in Motion by the Defendants for a Determination of the legal duty owed to the Plaintiff (#73) and a Motion by the Plaintiff to certify an interlocutory appeal under 28 U.S.C. § 1292(b) (#95). the court grants the Motion to Determine the Defendants' legal duty (#73) and grants in part and denies in part the Plaintiff's Motion to Certify an interlocutory appeal (#95).

BACKGROUND

This is a "public liability action" under the Price-Anderson Act.[1] filed by a radiation worker against an Illinois public utility and its contractor.[2] In this case, the Plaintiff was a radiation worker employed by a contractor to the utility who worked during September and October 1983. The Plaintiff was employed to prepare the recirculation piping in the dry well of the nuclear power plant for repair of the welds on the piping.

The Plaintiff alleges that he received a large dose of radiation (over 400 rem) from a nuclear flush which caused him to develop cataracts at age 44.[3] The Defendants claim that Plaintiff received a dose of only 1.465 rem[4], that the flush was only of a dilute chemical

1. 42 U.S.C. § 2011 *et seq.*
2. The Price-Anderson Act provides omnibus coverage for "public liability," 42 U.S.C. § 2014(w), to the licensee as well as th "any other person who may be liable..." 42 U.S.C. § 1024(t).
3. The Plaintiff also alleges that he has pulmonary dysfunction and other minor conditions which affect his physical and mental health.
4. The Plaintiff admits that he always wore the required radiation measuring instruments whenever he entered any area of the plant which contained radiation. The Defendants' evidence of a dose of 1.465 rem is based on business records which contain the readings of those scientific instruments. The Plaintiff alleges, however, that the numbers were misrecorded at the time and that his dose was really over 400 rem.

used to dissolve radioactive material, and that his contracts were simply inherited from his father who had the same type of cataracts at age 39. The Court had scheduled a trial so that a jury might determine the dose of radiation which the Plaintiff actually received. However, several issues arose regarding the legal standards to be applied.

JURISDICTION

The jurisdiction of this Court is based on 42 U.S.C. § 2210(n)(2) which provides in relevant part:

> With respect to any public liability action arising our of or resulting from a nuclear incident, the United States District Court and the district where the nuclear incident taking place outside the United States, the United States District Court for the District of Columbia, shall have original jurisdiction without regard to the citizenship of any party or the amount in controversy. Upon motion of the defendant or of the Commission, or the Secretary, as appropriate, any such action pending in any state court (including any such action pending on August 20, 1988) or the United States District Court shall be removed or transferred to the United States District Court having venue under this subsection...

A "public liability action" is "any suit asserting public liability." *See,* 42 U.S.C. § 2014(hh). "Public liability" is defined in the Act as "any legal liability arising our of or resulting from a nuclear incident." *See,* 42 U.S.C. § 2014(w). A "nuclear incident" is defined by the Act as:

> Any occurrence, including an extraordinary nuclear occurrence, within the United States causing, within or outside the United States, bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising our of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source,

special nuclear, or byproduct material...

See, 42 U.S.C. § 2014(q). Thus, because the Plaintiff alleges that his injuries resulting from a nuclear incident, making his case a "public liability action" which is subject to compensation under the procedures created by the Price-Anderson Act.

DOES THE PRICE-ANDERSON ACT WAIVE DEFENSES IN THIS CASE?

[1] The Plaintiff argues that the application of the Price-Anderson Act waives the requirement that he must prove negligence and reduces this case to the sole issue of causation. This Court disagrees.

The Price-Anderson Act provides that public liability actions are to be determined in accordance with the law of the state in which the nuclear incident occurred, unless such laws are inconsistent with provisions of the Price-Anderson Act. 42 U.S.C § 2014(hh). The question is whether the incident involved in this case was a "nuclear incident" [5] or an "extraordinary nuclear occurrence."[6] Essentially, a nuclear incident can be any allegation of personal harm or property damage from exposure to radiation at a commercial nuclear power plant. In contrast, an extraordinary nuclear occurrence is determined by the Nuclear Regulatory Commission or the Secretary of Energy upon a finding that a significant amount of

5. A "nuclear incident" is defined at 42 U.S.C. § 2014(q) to mean "any occurrence, including an extraordinary nuclear occurrence, within the United States causing, within or outside the United States, bodily injury, sickness, disease, or death, or loss or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear or byproduct material..."

6. An "extraordinary nuclear occurrence" is defined at 42 U.S.C. § 2014(j) to mean "any nuclear event causing a discharge or disbursal of source, special nuclear, or by-product material from its intended place of confinement in amounts off site, or causing radiation levels off site, or causing radiation levels off site, which the Nuclear Regulatory Commission or Secretary of Energy, as appropriate, determines to be substantial, and which the Nuclear Regulatory Commission or Sec retary of Energy, as appropriate, determines has resulted or will probably result in substantial damages to persons off site or property off site."

"source, special nuclear, or by-product" radioactive materials have been discharged off-site and "has resulted or will probably result in substantial damages to persons off-site or property off-site." *See,* 42 U.S.C. § 2014(j). Neither the Nuclear Regulatory Commission nor the Secretary of Energy has made a determination that an extraordinary nuclear occurrence occurred in this case, and the Plaintiff does not even allege that there has been any large release of these radioactive materials off-site. The Plaintiff claims to have been injured on-site while working inside the reactor building. Consequently, this case does not involve an "extraordinary nuclear occurrence" under the Price-Anderson Act.

The waiver of defenses which the Plaintiff claims applies to this case is found in 42 U.S.C. § 2201(n). By the very statutory language, that waiver is only applicable to a situation where the Nuclear Regulatory Commission or the Secretary of Energy had already found that an "extraordinary nuclear occurrence to which an insurance policy or contract furnished as proof of financial protection or an indemnity agreement applies..."

Further, although Congress has recently amended the Price-Anderson Act to allow removal to federal district courts in cases involving both "nuclear incidents" and "extraordinary nuclear occurrences," Congress did not expand the waiver of defenses to apply to "nuclear incidents." 42 U.S.C. § 2210(n)(2). Thus, this Court rejects the assertion that the waiver of defenses should apply to this case.

Given the clarity of the statutory language, this Court does not believe that there is a substantial ground for difference of opinion regarding the question of whether or not the waiver of defenses under the Price-Anderson Act should apply to this case; therefore, the Court denies the Plaintiff's request for certification of this issue. See, 28 U.S.C. § 1292 § 1292(b); *Von Bulow v. Von Bulow*, 634 F.Supp 1284, 1312 (S.D.N.Y.1986); *In re A.H. Robins Company, Inc.*, 107 F.R.D. 2, 16 (D.Kan.1985).

DO THE FEDERAL PERMISSIBLE DOSE LIMITS CONSTITUTE THE APPLICABLE STANDARD OF CARE?

[2] As stated earlier, public liability actions are to be determined in accordance with the law of the state in which the nuclear incident occurred, unless such laws are inconsistent with the provisions of the Price-Anderson Act. *See,* 42 U.S.C. § 2014(hh).

Under Illinois law, the Plaintiff claims that the Defendants owe to the Plaintiff a duty not to expose him to "excessive" radiation. The plaintiff never defines how much radiation is excessive as he asserts that evidence of negligence or lack thereof. *See, Darlings v. Charleston Hospital*, 33 Ill.2d 326, 332, 211 N.E.2d 253 (1965). The Plaintiff asserts that such evidence aids the jury in deciding what was feasible and what the Defendants knew or should have known, but it does not conclusively determine what standard of care should be applied. *Id.*

The Defendants maintain that the duty owed to a radiation worker id to keep his exposure below the maximum permissible dose set forth by the Federal Safety Standards which are binding on nuclear power plants. The Defendants argue that the Plaintiff connor allow a jury of laymen to establish their owen permissible dose limits by allowing them to set exposure standards and apply them retroactively to these Defendants. The Defendants contend that, while its is proper for the jury to weigh the evidence in determining as a matter of fact what dose of radiation the Plaintiff actually received, it is not proper to allow the jury to disregard the federal permissible dose limits and effectively set their own. The Defendants assert that the federal permissible dose limits set forth in 10 C.F.R. § 20.101 constitute the applicable standard of care. Even further, if the federal permissible dose limits would not constitute the applicable standard of care under Illinois law, the Defendants assert that it must be applied as the standard of care because application of any other standard of care would be inconsistent with the provisions

of the Price-Anderson Act. See, 42 U.S.C. § 2014(hh). This Court agrees with the Defendants.

In *Darling*, the court stated:

> Custom is relevant in determining the standard of care because it illustrates what is feasible, it suggests a body of knowledge of which the defendant should be aware, and it warns of the possibility of far-reaching consequences if a higher standard is required...In the present case the regulations, standards, and by-laws which the plaintiff introduced into evidence, performed much the same function as did evidence of custom. This evidence aided the jury in deciding what was feasible and what the defendant knew or should have known. It did not conclusively determine the standard of care and the jury was not instructed that it did.

Darling, 33 Ill.2d at 332, 211 N.E.2d 253.

Although the court did not find that the applicable regulations conclusively determined the standard of care in *Darling,* the Court believes that the regulation in this case can provide the standard of care because this case is distinguishable. Unlike *Darling,* the regulation in this case does not perform the same function as evidence of custom. Custom is a flexible guide for situations in which there is a margin of error. However, the regulation of nuclear energy is an exacting science which requires exacting standards. In other words, nuclear power plants need precise guidelines regulating what is allowable exposure to radiation so that they can place workers in radioactive areas when necessary without the expectation that the worker will be injured or that the power company will incur liability every time a worker receives a low dose of radiation.

Illinois courts have long held that safety standards are relevant to the issue of the duty owed.[7] Many of these

7. *Davis v. Marathon Oil Company*, 64 Ill.2d 380, 1 Ill.Dec. 93, 97, 356 N.E.2d 93, 97 (1976); Darling, 33 Ill.2d at 332, 211 N.E.2d 253; *Avery v. Moews Seed Corn Company*, 131 Ill.App.2d 842, 268 N.E.2d 561, 566 (3rd Dist.1987).

Illinois cases are analogous to the *Darling* case in that in those cases the plaintiff used the alleged violation of a statute or regulation as *prima facie* evidence of negligence.[8] The Defendants assert that, if Illinois law allows courts to hold that violation of a safety standard can be *prima facie* evidence of negligence, then the same Illinois law would allow a court to hold that compliance with the safety standard can be *prima facie* evidence of due care. *See, Hunt v. Blasius*, 55 Ill.App.3d 14, 12 Ill.Dec.813, 815, 370 N.E.2d 617, 619 (4th Dist.1977).

As the Plaintiff notes, however, the cases allowing a party to use a safety standard as *prima facie* evidence of negligence would not necessarily allow the Defendants to use a standard in this case as a mandatory standard under which compliance would automatically constitute die care. Further, the *Hunt* case cited by Defendants had that a manufacturer's compliance with government standards and specifications precluded liability in that case only because compliance with the applicable government standards and specifications in that case was a mandatory requirement for sale of the product to the governmental entity. *Hunt*, 12 Ill.Dec. at 816, 370 N.E.2d at 619. In *Hunt*, the manufacturer could not deviate from the specifications the government provided; therefore, the court held that the manufacturer could not be liable. *Id.*

[3] In order to determine whether or not the federal regulation is this case can be established as the standard of care, this Court must look to the policy reasons for imposing a duty under Illinois law. Under Illinois law, the duty to be imposed is a question of law to be decided by the Court. *Laufenberg v. Golab*, 108 Ill.App.3d 133, 63 Ill.Dec. 875, 877, 438 N.E.2d 1238, 1240 (3rd Dist.1982). The imposition of a duty is an act of judicial policy making. *Homer v. Pabst Brewing Company*, 806 F.2d 119, 121 (7th

8. *Boyer v. Atchison, Topeka, and Santa Fe Railway Company*, 38 Ill.2d 31, 230 N.E.2d 173 (1967); *Batteast v. Wyeth Laboratories, Inc.*, 172 Ill.App.3d 114, 122 Ill.Dec. 169, 182, 526 N.E.2d 428, 441 (1st Dist.1987); *Pyne v. Witmer*, 159 Ill.App.3d 254, 111 Ill.Dec.452, 455, 512 N.E.2d 993, 996 (2nd Dist.1987).

Cir.1986). Thus, Illinois courts have extended the concept of duty with caution and restraint. *Id.* Before placing a duty upon a defendant, a court should first consider "the likelihood of injury from the existence of a condition, the magnitude of guarding against it, and the consequences of placing the burden upon the defendant..." *Barnes v. Washington*, 305 N.E.2d 535, 539 (1973).

The "condition" at issue in this case is the occupational radiation exposure at an operating nuclear power plant. The safety standards set forth in 10 C.F.R. § 20.101 are specifically titled a "permissible dose." It authorizes a utility to allow a radiation worker to receive a dose of up to 3 rem for each quarter of the year (thus up to 12 rem each year) if the utility knows the worker's prior dose and it does not exceed an average of 5 rem per year for each year of the worker's age after 18. If the worker's prior dose, 10 C.F.R. § 20.101 limits the permissible dose to 1.25 rem per quarter of the year (thus, 5 rem per year).

These federal permissible dose limits are based upon the national and international scientific consensus as to the hypothetical risk from exposure to low occupational levels of ionizing radiation. *See, Johnston v. United States*, 597 F.Supp. 374, 423-425 (D.Kan.1984); (affidavit of Dr. Lauristin S. Taylor attached to the Defendants' Motion for Summary Judgement referencing the NCRP Report No. 39.). In 1948, the National Council on Radiation Protection and Measurements (NCRP) published the National Bureau of Standards Handbook No. 59 which defined the permissible dose as "the dose of ionizing radiation that, in light of the present knowledge, is not expected to cause appreciable bodily injury to people at any time during his lifetime." *Johnston,* 597 F.Supp. at 424-425. Appreciable bodily injury was defined as:

> Any bodily injury or affect that the average person would regard as being objectionable and/or competent medical authorities would regard as being deleterious to the health and well-being of the individual.

Id. The Defendants assert that this same philosophy and terminology has persisted from 1948 to the present, resulting in the current Nuclear Regulatory Commission dose limits set forth in 10 C.F.R. § 20.101.

In determining the likelihood of the injury from radiation, this Court believes that it should give deference to the administrative regulations which are the result of an agency's applied expertise. Although Illinois courts have not adopted administrative regulations as conclusive of the duty of care, Illinois Supreme Court has found that regulations are relevant evidence regarding the applicable standard of care. *See, Davis*, 1 Ill.Dec. at 97, 356 N.E.2d at 93.

In addition, Illinois courts have explicitly used the Restatement (2d) of Torts, § 286 to determine the proper duty where there is a regulation or other law relevant to the applicable standard of care. *Davis,* 1 Ill.Dec. at 97, 356 N.E.2d at 97; *Dezort v. Village of Hinsdale*, 35 Ill.App.3d 703, 342 N.E.2d 468, 472 (2nd Dist.1976(; *Mangen v. F.C. Pilgrim & Co.*, 32 Ill.App.3d 563, 336 N.E.2d 374, 381 (1975). The Restatement (2d) of Torts, § provides:

> The court may adopt as a standard of conduct of a reasonable man the requirements of a legislative enactment or administrative regulation whose purpose id found to be exclusively or in part (a) to protect a class of persons which includes the one whose interest is invaded, and (b) to protect a particular interest which is invaded, and (c) to protect that interest against the kind of harm that has resulted, and (d) to protect that interest against the particular hazard from which the harm results.

Restatement (2d) of Torts, § 286 (1965).

Each of the four § 286 elements apply to this case. First, the purpose of the federal permissible dose regulations is to protect radiation workers. *See,* 10 C.F.R. § 20.101; Johnston, 597 F.Supp. at 423-425; *Bubash v. Philadelphia Electric Company*, 717 F.Supp. 297, 299

(N.D.Pa.1989). The plaintiff was a radiation worker at the time he received his radiation exposure in this case.

Second, the "interest" which the Plaintiff claims has been invaded in this case is the radiation exposure which he received as a radiation worker, precisely the focus of the regulation and the particular interest which it was created to protect. 10 C.F.R. § 20.101.

Third, the regulations were enacted to protect that interest against precisely the kind of harm (i.e., radiation-induced physical injury) that the Plaintiff alleges had resulted. The regulation is specifically labeled "radiation dose standards for individuals in restricted areas." 10 C.F.R. § 20.101; *Johnston,* 597 F.Supp. at 390-391.

Fourth, the regulations were enacted to protect that interest against the particular hazard (i.e. excess exposure) form which the Plaintiff claims harm has resulted. *(See,* affidavit of Dr. Lauristin S. Taylor).

In a highly technical field such as this, although a plaintiff should be provided a very high level protection from excessive exposure from radiation,. a defendant public utility should also be provided with some clear statement regarding how it may limit a worker's dose without exposing the worker to injury or itself to liability.

In addition, federal courts have held that mere exposure to a low dose of radiation is not the equivalent of a physical injury[9] and that the chance that a low dose of radiation caused cancer is so remote as to constitute speculation.[10]

Finally, the Atomic Energy Act sets forth an extensive regulatory licensing scheme pursuant to which nuclear power facilities are operated. There are two aspects of the federal regulatory scheme governing the operation of nuclear power plants which are relevant to the issues here. One is the federal regulatory framework governing actions for claims arising our of the doses received at the plant. Both confirm a paramount federal interest.

9. Bubash, 717 F.Supp. at 300; Laswell v. Brown, 683 F.2d 261, 262 (8th Cir.1982).
10. Johnston, 597 F.Supp. at 425-426.

Nuclear power plants may not be operated without a license from the United States Nuclear Regulatory Commission (NRC). 10 C.F.R. §§ 30.3, 50.57, and 52.1. Public utilities which choose to produce electricity for the public through the use of nuclear power must comply with the extensive federal regulation which exists in this unique field. See, 10 C.F.R. § 50.57 (a)(2). 10 C.F.R. § 20.101 sets detailed exposure safety regulations for the radiation workers who elect to work in this field. Bubash, 717 F.Supp. at 298. This regulation expressly recognizes that radiation workers of necessity will receive some low level radiation area (just as it is an unavoidable aspect of receiving a medical x-ray). The Price-Anderson Act only allows the application of state law as long as it is not contrary to the Act, (see, 42 U.S.C. § 2014(hh)). If the application of Illinois law does not result in the adoption of the federal permissible dose limits as the duty owed by the Defendants, this Court believes that Illinois law would be inconsistent with federal law and that federal law would have to take precedence.

[4] This Court further finds that the question of whether or not the regulation in this case should be adopted as the standard of care applicable to this case is an issue which should be certified under 28 U.S.C. § 1292(b). This issue is an issue of first impression and is of a controlling nature in this case. The issue is of a controlling nature because the extent of the duty owed may determine whether or not a jury could find in favor of the Plaintiff. Further, there is a substantial ground for difference of opinion because this Court has not found federal law or Illinois law which has applied regulatory standards as mandating a particular standard of care for a defendant.

Also, and immediate appeal from this Court will materially advance the ultimate termination of this litigation as this Court believes that this case will take approximately one month to try. If this case is tried, this Court certainly believes that this issue will be appealed and this case possibly retired; therefore, the Court believes that

this appeal will materially advance the termination of this litigation.

CONCLUSION

In sum, the Court GRANTS the Defendants' Motion to Determine its legal duty to the Plaintiff (#73). And, the Court GRANTS the Plaintiff's Motion to Certify an interlocutory appeal in part and DENIES it in part (#95).

APPENDIX E

AO 450 (Rev. 5/85) Judgment in a Civil Case

FILED

JUL 23 1992

JOHN M. WATERS, Clerk
U.S. DISTRICT COURT
CENTRAL DISTRICT OF ILLINOIS

United States District Court

CENTRAL DISTRICT OF ILLINOIS

JAMES RICHARD O'CONNER
Plaintiff

V.

COMMONWEALTH EDISON COMPANY and
LONDON NUCLEAR SERVICE, INC.
Defendants

JUDGMENT IN A CIVIL CASE

CASE NUMBER: 88-1272

[X] Decision by Court. This action came to trial or hearing before the Court. The issues have been tried or heard and a decision has been rendered.

IT IS ORDERED AND ADJUDGED, that judgment is entered in favor of the defendants and against the plaintiff on all claims, with costs.

[ ] Jury Verdict. This action came before the Court for a trial by jury. The issues have been tried and the jury has rendered its verdict.

IT IS ORDERED AND ADJUDGED

July 23, 1992
Date

JOHN M. WATERS
Clerk

(By) Deputy Clerk Stephanie Haigh

Stephanie Haigh

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